

Zoological Record

Vol. 91, Sect. 12, 1954

ARACHNIDA

COMPILED BY

ERNEST BROWNING

LONDON

PUBLISHED BY

THE ZOOLOGICAL SOCIETY OF LONDON

PRICE SEVEN SHILLINGS AND SIXPENCE

January, 1956

SEPARATE SECTIONS OF THE ZOOLOGICAL RECORD

In addition to the complete bound volume, the separate Sections may be obtained singly, bound in printed paper covers.

The following are the Sections and their prices, viz.:—

	<i>s.</i>	<i>d.</i>
1. Comprehensive Zoology	2	6
2. Protozoa	7	6
3. Porifera	2	0
4. Coelenterata	4	0
5. Echinoderma	2	6
6. Vermes	10	0
7. Brachiopoda	3	0
8. Bryozoa	2	0
9. Mollusca	10	0
10. Crustacea	5	0
11. Trilobita	3	0
12. Arachnida	7	6
*13. Insecta	30	0
14. Protochordata	2	0
15. Pisces	7	0
16A. Amphibia	5	0
16B. Reptilia	6	0
17. Aves	7	6
18. Mammalia	7	6
19. List of New Genera and Subgenera	3	0

* Obtainable only from the Commonwealth Institute of Entomology, 56, Queen's Gate, London, S.W.7.

12. ARACHNIDA

to which are added

MEROSTOMATA, PANTOPODA, PENTASTOMIDA, TARDIGRADA,

MYRIAPODA and ONYCHOPHORA

compiled by

ERNEST BROWNING

CONTENTS

	PAGE
I. TITLES (All groups)	2
II. SUBJECT INDEX :—	
Merostomata	39
Arachnida (incl. Pantopoda, Pentastomida and Tardi- grada)	39
Myriapoda	53
Onychophora	55
III. SYSTEMATIC INDEX :—	
Merostomata	55
Pantopoda	55
Scorpiones	57
Uropygi	57
Amblypygi	58
Palpigradi	58
Ricinulei	58
Pseudoscorpiones	58
Solifugae	60
Opiliones	60
Araneae... ..	64
Acari	75
Anthracomarti	104
Kustarachnida	104
Haptopoda	104
Trigonotarbi	104
Phalangiotarbi	104
Architarbi	104
Pentastomida	104
Tardigrada	104
Chilopoda	104
Diplopoda	105
Symphilida	112
Pauropoda	112
Onychophora	113

I.—TITLES

Opinion 204. Determination of the species eligible to be selected as the type species of the nominal genera established by Koch (C. L.) in the portions of the work entitled *Deutschlands Crustaceen, Myriapoden und Arachniden* published in the period 1835–1842. *Opin. int. Comm. zool. Nom.* 3 1954 : 297–308.

Opinion 218. Addition of the generic name *Liodes* Heyden, 1826 (Class Arachnida) to the Official Index of rejected and invalid generic names in zoology. *Opin. int. Comm. zool. Nom.* 4 1954 : 83–92.

Opinion 320. Validation, under the plenary powers of the generic name *Limulus* Müller (O. F.), 1785 (Class Merostomata) and confirmation of the entry of that name on the *Official List of Generic Names in Zoology* (validation of an error in *Opinion* 104). *Opin. int. Comm. zool. Nom.* 9 1955 : 147–170.

1.—**Anon.** World distribution of rickettsial diseases tick-borne and mite-borne forms. Basic sources. *Amer. Geogr. Soc.* 1954 *Atlas of Diseases* pl. 11.

2.—**Anon.** The harvest mite—Explanatory leaflet. *Brit. Mus. (Nat. Hist.) No. Z.1* 1954 : 1–7 fig.

3.—**Anon.** The L-C treatment of venomous bites or sting—*Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 68 1954 : 148.

4.—**Anon.** Red spiders in Western Europe. *Plant Protect. Bull.* 25 1954 : 71–74.

5.—**Abd-el-Wahab, A.** The female genital system of the scorpion, *Buthus quinquestriatus* (H. & E.). *Bull. zool. Soc. Egypt* No. 11, 1953 : 1–8, pls. 1–3.

Abdusalam, M. *see* Sarwar, M. M. 645.

Adams, A. L. *see* Therrien, A. A. 727.

Aeschlimann, A. *see* Geigy, R. 285.

6.—**Agricultural Research Council.** Control of red spider mite. *Ent. mon. Mag.* 90 1954 : 63.

Akyay, N. *see* Ozsan, K. 551.

Akyay, N. *see* Payzin, S. 566.

Alford, H. I. *see* Calhoun, L. 134.

7.—**Allington, H. V. & Allington, R. R.** Insect bites. *J. Amer. med. Ass.* 155 1954 : 240–247.

Allred, D. M. *see* Mulaik, S. 526.

Alwar, V. S. *see* Ramanujachari, G. 593.

8.—**Anantaraman, M.** The development of *Monezia* the large tapeworm of domestic ruminants. *Sci. & Cult.* 17 4 1951 : 155–157.

9.—**Anastos, G.** Tick spermatozoa and their possible confusion with internal parasites of ticks. *J. Parasit.* 40 5, Sect. 2 1954 : 28. [Abstract.]

10.—**Anastos, G.** Description of a tick, *Ixodes percavatus* Neumann, 1906, from Tristan da Cunha. Results Norweg. Sci. Exp. Tristan da Cunha 1937–1938 No. 27 Oslo 1954 : 1–4 figs. 1A–1L.

11.—**Anastos, G.** The 3rd Danish Expedition to Central Asia. Zoological Results 12. Ticks (Chelicerata) from Afghanistan. *Vidensk. Medd. dansk naturh. Foren. Kbh.* 116 1954 : 169–174.

12.—**Anderson, L. D.** The tomato russet mite in the United States. *J. econ. Ent.* 47 1954 : 1001–1005 figs. 1–2.

13.—**André, M.** Considérations sur l'emploi des caractères physiologiques dans l'étude des Eriophyides. *Ann. Mus. Congo belg. N.S. 4to Zool.* 1 1954 : 117–119.

14.—**André, M.** Tétranyque nouveau, parasite de *Cassia siamea* Lam. et *Grewia mollis* Juss., à Dakar. *Bull. Inst. franç. Afr. noire* 16A 1954 : 859–861 figs. 1–5.

15.—**André, M.** Acariens Phytoptipalpidaé parasites des orchidées, cactées et plantes grasses cultivées en serres (suite). II.—*Brevipalpus cactorum* Oud. et *B. confusus* Baker. *Bull. Mus. Hist. nat. Paris* (2) 25 6 (1953) 1954 : 563–571 figs. 1–14.

16.—André, M. Présence du *Thrombicula deliensis* (Walch) en Cochinchine. Bull. Mus. Hist. nat. Paris (2) 26 1954 : 93-94.

17.—André, M. Sur la découverte, en Indochine, du *Thrombicula* (*T.*) *wichmanni* Oud., adulte, (Acarien). Bull. Mus. Hist. nat. Paris (2) 26 1954 : 95-99.

18.—André, M. Sur quelques Thrombidions des Nouvelles-Hébrides. Bull. Mus. Hist. nat. Paris (2) 26 1954 : 194-199 figs. 1-21.

19.—André, M. Description d'une nouvelle larve d'*Ascoschöngastia* (Acarien) parasite de rats en Indochine. Bull. Mus. Hist. nat. Paris (2) 26 1954 : 200-203 figs. 1-5.

20.—André, M. *Brevipalpus geisenheyneri* (Rübsaamen), acarien parasite des arbres fruitiers. Bull. Mus. Hist. nat. Paris (2) 26 1954 : 326-333 figs. 1-5.

21.—André, M. Un nouveau *Thrombidion* recueilli au Maroc. *Dinothrombium* (*Dolichothrombium*) *grandjeani* n. sp. Bull. Mus. Hist. nat. Paris (2) 26 1954 : 476-479 figs. 1-9.

22.—André, M. Sur la présence en France du *Brevipalpus geisenheyneri* (Rüb.). [Acarien.] Bull. Mus. Hist. nat. Paris (2) 26 1954 : 480-481.

23.—André, M. Acariens parasites accidentels de l'appareil respiratoire de l'homme. Nature, Paris No. 3227 1954 : 102-104 figs. 1-4.

24.—Angelier, E. La notion de frontière biogéographique. (Quelques exemples de répartition d'Hydracariens dans les Pyrénées). C.R. Soc. Biogéogr. 30 259-262 1954 : 46-47.

25.—Angelier, E. Halacariens des sables littoraux méditerranéens. Vie et Milieu 4 (1953) 1954 : 281-289 figs. 1-14.

26.—Angelier, E. Contribution à l'étude de la faune d'eau douce de Corse. Acariens psammiques (Hydrachnellae et Porohalacaridae). Vie et Milieu 4 1953 : 505-539 figs. 1-59.

27.—Angelier, E. Contribution à l'étude de la faune d'eau douce de Corse. Acariens (Hydrachnellae et Porohalacaridae) des eaux superficielles. Vie et Milieu 5 1954 : 74-148 figs. 1-112.

28.—Angelovski, T. P. Contribution à la connaissance de faune des tiques de la Macédoine. 1.—Les tiques, trouvées sur le bovin dans le district de Skopje. Acta Veterinaria Belgrad 4 2 1954 : 53-57. [In Serbian with French summary.]

29.—Ansley, H. R. A cytological and cytophotometric study of alternative pathways of meiosis in the house centipede (*Scutigera forceps* Rafinesque). Chromosoma 6 1954 : 656-695 figs. 1-40.

30.—Anthon, E. A. Peach silver mite control. J. econ. Ent. 47 1954 : 866-868.

Antonini, E. see Bettini, S. 86.

31.—Aragão, H. B. & Fonseca, F. da. Notas de ixodologia. V—A propósito da validade de algumas espécies do gênero *Amblyomma* do continente Americano (Acari: Ixodidae). Mem. Inst. Osw. Cruz 51 1954 : 485-492.

32.—Aragão, H. B. & Fonseca, F. da. Notas de ixodologia. VII—*Olocentor nitens* Neumann, 1897) versus *Anocentor columbianus* Schulze, 1937 e comentários sobre a rápida disseminação desse Ixodideo no Brasil. (Acari: Ixodidae.) Mem. Inst. Osw. Cruz 51 1954 : 499-501.

Aragão, H. B. see Fonseca, F. da 266

33.—Arthur, D. R. Recent developments in tick control in Britain. Emp. J. exp. Agric. 21 84 1953 : 321-330.

34.—Arzt, T. Frauenschuh und Spinne. Natur u. Volk 84 1954 : 421-425 figs. 1-4.

35.—Asanuma, K. Descriptive notes on two new species of parasitic mites belonging to the genus *Haemolaelaps* from Japan. (Acari—Laelaptidae.) Misc. Rep. Res. Inst. nat. Resour. Tokyo No. 30 1953 : 10-17 figs. 1-4.

36.—Asanuma, K. & Sekikawa, K. Studies on ticks of the genus *Ixodes* parasitic on small rodents of the superfamily Muroidea in the Japanese Islands. (A preliminary note.) I & II. Misc. Rep. Res. Inst. nat. Resour. Tokyo No. 28 1952 : 107-116 8 figs.; No. 31 1953 : 99-112 10 figs.

37.—Asanuma, K., Sekikawa, K. & Nakagawa, H. Chigger mites from the neighbourhood of Ôtsuki, Central Japan, with special reference to the occurrence of *Trombicula scutellaris*.

Misc. Rep. Res. Inst. nat. Resour. Tokyo No. 32 1953 : 92-101. [In Japanese.]

38.—Ashby, G. J. Spiders. Bull. Amat. Ent. Soc. 13 1954 : 10-11 figs.

39.—Ashby, G. J. Black widows and Tarantulas. Zoo Life 9 1954 : 23-26 4 figs.

40.—Assis-Fonseca, E. C. M. d' & Cowley, J. Insects and spiders collected in Glamorgan, June and July, 1952. Trans. Cardiff Nats.' Soc. 81 1953 : 66-74.

Atcheson, W. C. *see* Cory, E. N. 184

41.—Audy, J. R. Malaysian parasites III. A summary review of collections of Trombiculid mites in the Asiatic-Pacific area. Stud. Inst. med. Res. F.M.S. No. 26 1954 : 29-44.

42.—Audy, J. R. Malaysian parasites IX. Notes on the taxonomy of Trombiculid mites with description of a new subgenus. Stud. Inst. med. Res. F.M.S. No. 26 1954 : 123-170 figs. 1-3.

43.—Audy, J. R. Chigger mites and jigger fleas. Trans. R. Soc. trop. Med. Hyg. 48 1954 : 540-541.

44.—Audy, J. R. & Harrison, J. L. Malaysian parasites I. Collections made in Malaya by the Colonial Office Scrub Typhus Research Unit. Stud. Inst. med. Res. F.M.S. No. 26 1954 : 1-22 figs. 1-3.

45.—Audy, J. R. & Natchatram, M. A method of rearing individual Trombiculid mites in the field. Nature, Lond. 174 1954 : 1021-1022.

Audy, J. R. *see* Traub, R. 731, 732, 734.

46.—Auerbach, S. I. A new centipede from Illinois (Chilopoda; Geophilomorphae; Geophilidae). Nat. Hist. Misc. No. 136 1954 : 1-5 fig. 1.

47.—Bacelar, A. Algumas Aranhas de Moçambique (Coleção de Rose Monteiro). Arch. Mus. Bocage No. 24, 1953 : 1-19, figs. 1-8.

48.—Băcescu, M. Contributions à la connaissance des Pycnogonides de la Mer Noire. Stud. Cercet. Inframicrobiol. Microbiol. Parasit. Acad. române 5 1953 : 263-270 figs. 1-3. [French résumé.]

49.—Bader, C. Das Darmsystem der Hydracarin. Eine vergleichend-anatomische Untersuchung. Rev. suisse Zool. 61 1954 : 505-549 figs. 1-40.

50.—Baerg, W. J. The brown widow and the black widow spiders in Jamaica (Araneae, Theridiidae). Ann. ent. Soc. Amer. 47 1954 : 52-60 figs. 1-2.

51.—Baerg, W. J. Regarding the biology of the common Jamaican scorpion. Ann. ent. Soc. Amer. 47 1954 : 272-276.

52.—Baerg, W. J. The black widow and brown widow spiders in Jamaica. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 65 1954 : 77-79 figs.

53.—Baerg, W. J. Notes on the common Jamaican scorpion *Centruroides insulanus* Thorell. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 66 1954 : 95-96 3 figs.

54.—Bagnall, R. S. Notes on British Chilopods (Centipedes). I. Ann. Mag. nat. Hist. (10) 15 1935 : 473-479.

Bakeer, N. N. *see* Ter-Vartanov, V. N. 724.

55.—Baker, A. D., Brown, G. L. & James, A. B. Relationships of fungi, mites and the potato-rot nematode. Science 119 1954 : 92-93.

56.—Baker, E. W. & Pritchard, A. E. A guide to the spider mites of cotton. Hilgardia 22 1953 : 203-234 pl. 1, figs. 1-23.

57.—[Balashov, Y. S.] Particulars of the diurnal rhythm in the dropping off of females of *Ixodes persulcatus* after feeding on cows. C.R. Acad. Sci. URSS. N.S. 98 1954 : 317-319. [In Russian.]

Balát, F. *see* Rosický, B. 634.

58.—Ballard, R. C. The biology of the predacious mite *Typhlodromus fallacis* (Garman) (Phytoseiidae) at 78° F. Ohio J. Sci. 54 1954 : 175-179.

59.—Ballard, R. C. & Davidson, R. H. Control of mites in clothes moth cultures. J. econ. Ent. 47 1954 : 93.

60.—Baluzuc, J., Miré, P. de & Sigwalt, J. Sixieme, septieme et huitieme campagnes biospeleologiques dans le Vivarais (août 1951, mai 1952, mai 1953). Bull. men. Soc. linn. Lyon 23 5 1954 : 138-143 fig.

Banks, N. *see* Carpenter, F. M. 141.

61.—Barnard, K. H. South African Pycnogonida. Ann. S. Afr. Mus. 41 1954 : 81–158 figs. 1–34.

62.—Barnes, B. M. & Barnes, R. D. The ecology of the spiders of maritime drift lines. Ecology 35 1954 : 25–35 figs. 1–13.

Bassett, A. M. *see* Palmer, A. R. 555.

Basu, B. C. *see* Menon, P. B. 499.

63.—Batchelor, G. S. & Breakey, E. P. A new mite, *Vasates lupini* n. sp., associated with rosette of lupine. (Acarina, Phyllocoptoidae.) Ann. ent. Soc. Amer. 47 1954 : 425–427 figs. 1–2.

64.—Bator, A. & Schmoelzer, K. Die Uferzoenosen im Mündungsgebiet des Joce-Flusses. Mem. Ist. ital. Idrobiol. de Marchi 8 1954 : 205–256 figs. 1–12.

Beccari, F. *see* Melis, R. 497.

65.—Becker, H. Über den Einfluss konstanter Temperaturen, relativer Luftfeuchtigkeiten und Licht auf die Frühjahrsentwicklung der Wintereier der Obstbaumspinnmilbe *Paratetranychus pilosus* Can. et Fanz. Anz. Schädling. 25 1952 : 116–118 figs. 1–5.

66.—Bédé, P. Le venin d'un scorpion saharien, *Buthacus arenicola* E. Simon. Arch. Inst. Pasteur Alger. 31 4 1953 : 400–410.

67.—Beer, R. E. A revision of the Tarsonemidae of the Western hemisphere (Order Acarina). Kans. Univ. Sci. Bull. 36 1954 : 1091–1387 pls. 1–25.

68.—Beier, M. Four new tropical Pseudoscorpionidea. Ann. Mag. nat. Hist. (10) 15 1935 : 484–489 figs. 1–4.

69.—Beier, M. Pseudoscorpioniden aus dem Belgischen Congo. Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954 : 132–139, figs. 1–6.

70.—Beier, M. Einige neue Pseudoscorpione aus dem Genueser Museum. Ann. Mus. Stor. nat. Genova 66 1954 : 324–330, figs. 1–3.

71.—Beier, M. Eine neue *Neobisium*-Art (Pseudoscorp.) aus der Dauphiné. Ann. naturh. Mus. Wien 59 1953 : 155–156 1 fig.

72.—Beier, M. *Neobisium* (*Blothrus*) *patrizii*, ein neuer Höhlen-Pseudoscorpion aus Mittelitalien. Boll. Soc. ent. ital. 83 1953 : 139–140 fig. 1.

73.—Beier, M. Pseudoscorpionidae. E. Titschack. Beitr. Fauna Perus 4 Jena (Gustav Fischer) 1954 : 1–12, figs. 1–11.

74.—Beier, M. Report from Professor T. Gislén's Expedition to Australia in 1951–1952. 7. Pseudoscorpionidea. Kungl. Fysiogr. Sällsk. Handl. N.F. 65 3 1954 : 1–26 figs. 1–11.

75.—Beier, M. Eine Pseudoscorpioniden-Ausbeute aus Venezuela. Mem. Mus. Civ. Stor. Nat. Verona 4 1954 : 131–142 figs. 1–6.

76.—Beier, M. Ein neuer Olpiide (Pseudoscorp.) aus dem Hochlande von Perú. Senckenbergiana 34 1954 : 325–326 fig. 1.

77.—Beier, M. Zwei neue Pseudoscorpione aus Ostafrika. Zool. Anz. 152 1954 : 84–88 figs. 1–3.

78.—[Beklemensheva, V. N.] [Manual of medical entomology with foundations of entomology and hydrobiology.] Moscow 1949, 490 pp., 319 figs. [In Russian.]

79.—Bell, D. S., Pounton, W. D., Edgington, B. H. & Bentley, O. G. *Psorergates ovis*—a cause of itchiness in sheep. J. Amer. vet. med. Assoc. 120 900 1952 : 117–120 figs. 1–5.

80.—[Benda, R. & Gaiberger, K.] [The isolation of *Pasteurella tularensis* from blood-engorged ticks, *Ixodes ricinus* L.] Čsl. Biol. Prague 2 6 1953 : 380–384. [In Russian with German summary.]

Bentley, O. G. *see* Bell, D. S. 79.

Beresford-Jones, W. P. *see* Oldham, J. N. 545.

Berg, R. van den *see* Ewer, D. W. 252.

81.—Berland, L. Notes faunistiques sur les Antilles francaises. Bull. Soc. zool. Fr. 78 1954 : 233–239.

82.—Bernard, J. Etudes sur les rongeurs. III. Une dermatose des campagnols (*Microtus* sp.) provoquée par *Euschöngastia costulata* Will. (Acarina-Trombiculidae.) Parasitica 9 1953 : 132–138 1 pl. [English summary.]

83.—Bertolani, M. Ulteriore contributo alla conoscenza dei tardigradi italiani. P.V. Soc. tosc. Sci. nat. 54 5 1947 : 64–67 fig. 1.

84.—Besseling, A. J. Nederlandse Hydrachnellae. Ent. Ber., Amst. 15 1954 : 186–190.

85.—Besseling, A. De variabiliteit van *Torrenticola (Russetria) amplexa* (Koenike 1908) (Acari, Hydrachnellae). Tijdschr. Ent. 97 1954: 247-256.

86.—Bettini, S., Antonini, E. & Cantore, G. La terapia del morso di *Iatrodectus 13-guttatus*, Rossi. Nota II. Cinque nuovi casi di iatrodectismo trattati con gluconato di calcio endovenoso. Arch. ital. Sci. med. trop. parasit. 34 10 1953: 579-587. [English summary.]

87.—Bigland, C. H. A rabbit infestation with poultry mites and experimental mite transmission of fowl cholera. Canad. J. comp. Med. 18 6 1954: 213-214 2 figs.

88.—Birabén, M. Selenopidos Argentinos. Miss. Estud. Patol. reg. Argent. 24 83-84 1953: 103-113 figs. 1-11.

89.—Birabén, M. Nuevo genero de la rara familia PRODIDOMIDAE. Neotropica 1 No. 1 1954: 13-16 figs. 1-7.

90.—Birabén, M. *Neoxyphinus*. Nuevo género de arañas de la familia Oonopidae. Physis 20 59 1954: 453-458 9 figs.

91.—Bishopp, F. C. & Philip, C. B. Carriers of human diseases. Yearbook Agric. Washington Separate No. 2307 (1952) 1953: 147-160 fig.

92.—Blair, R. H. & Parsons, A. G. The blue-headed wagtail (*Motacilla flava flava*) in Cornwall, with a note on the nest parasites by F. A. Turk. Cornwall Bird Watching & Preservation Soc. Ann. Rep. [1954]: 4 pp.

93.—[Blednikh, A. G., Primak, A. T. & Chebotariov, R. S.] [Application of products of brown-coal tar in control of domestic animal parasites.] Bull. Acad. Sci. Ucr. 2 1953: 56-60. [In Ukrainian.]

Blumer, T. N. see Brown, W. L. 119.

94.—Bonnet, P. Difficultés de nomenclature chez les Aranéides. VIII. Le nom de genre *Sason*. Bull. Soc. Hist. nat. Toulouse 88 1953: 295-296 fig.

95.—Bonnet, P. Difficultés de nomenclature chez les Aranéides. IX. Un imbroglio de *Tegenaria*. Bull. Soc. Hist. nat. Toulouse 89 1954: 79-80.

96.—Bonnet, P. Difficultés de nomenclature chez les Aranéides. X. La question *Acrosoma*, *Micrathena*,

Plectana. Bull. Soc. Hist. nat. Toulouse 89 1954: 81-82.

97.—Bonnet, P. Difficultés de nomenclature chez les Aranéides. VII. Le problème *Agelena-Agalena*. (L'ethologie d'une Araignée pyrénéenne au secours de la graphie de son nom.) C.R. Socs sav. Paris Dép. No. 78 1953: 329-332.

98.—Boock, O. J. & Gonzaga de Lordello, L. Diplopoda depredador de tubérculos de batatinha. Bragantia 12 (1952) 1953: 343-348 fig. 1.

99.—Booth, B. H. & Jones, R. W. Epidemiological and clinical study of grain itch. J. Amer. med. Ass. 150 1952: 1575-1579 fig.

100.—Born, A. L. Gesucht wird: *Pediculoides ventricosus*. Mikrokosmos 43 9 1954: 204-205 fig. 1.

101.—Boudreaux, H. B. A simple method of collecting spider mites. J. econ. Ent. 46 1953: 1102-1103.

102.—Boudreaux, H. B. New species of Tetranychid mites. Pan-Pacific Ent. 30 1954: 181-186 figs. 1-19.

103.—Bourdillon, A. Contribution à l'étude des Pycnogonides de Tunisie. Notes Sta. océanogr. Salammbo No. 35 1954: 1-8 pl. 1.

104.—Bourdillon, A. Les Pycnogonides de Marseille et ses environs. Rec. Trav. Stat. mar. Endoume No. 12 1954: 145-158 pls. 1-2.

105.—Bow, M. R. & Brown, J. H. Rocky Mountain spotted fever in Alberta, 1935-1950. Canad. J. publ. Hlth. 43 1952: 109-115 figs. 1-3.

Bowery, T. G. see Haynes, H. L. 323.

106.—Box, H. E. List of sugar-cane insects.—A synonymic catalogue of the sugar-cane insects and mites of the world, and of their insect parasites and predators, arranged systematically. London (Commonw. Inst. Ent.) 1953: 101 pp.

107.—Boyce, A. M. Insects and mites and their control. In BACHELOR & WEBBER—The Citrus Industry 2 1948: 665-812.

108.—[Bozhenko, V. P. & Shevchenko, S. F.] [Ecology of *Dermacentor marginatus* Sulz. in the environments of the Don delta.] Zool. Zh. 33 1954: 556-560. [In Russian.]

Breakay, E. P. *see* Batchelor, G. S. 63.

109.—Breckenridge, R. L. Infestation of the skin with *Demodex folliculorum*. Amer. J. clin. Path. 23 4 1953 : 348-352 figs. A-E.

110.—[Bregetova, N. G.] [Fauna of Gamasids in the Far East.] Mag. Parasit., Leningr. 15 1953 : 302-338 figs. 1-3. [In Russian.]

111.—[Bregetova, N. G.] [The mites of the genus *Bdellonyssus* Fonseca, 1941 (Gamasoidea, Liponyssidae).] Trav. Inst. zool. Acad. Sci. U.R.S.S. 13 1953 : 310-319 figs. 1-9. [In Russian.]

112.—[Bregetova, N. G.] [Gamasid mites (Gamasoidea) of the district of the middle track in the Urals.] Trud. Inst. zool. Acad. Sci. U.R.S.S. 16 1954 : 471-488 figs. 1-4. [In Russian.]

113.—[Bregetova, N. G. & Kolpakova, S. A.] [Gamasid mites (Parasitiformes, Gamasoidea) parasitic on field vole (*Arvicola terrestris*) and inhabitants of their nests in the Volga delta.] Mag. Parasit. Moscow 14 1952 : 56-70 figs. 1-4. [In Russian.]

114.—[Bregetova, N. G. & Nelzina, E. N.] [Marmote mites, *Haemogamasus citelli* Bregetova & Nelzina, sp. nov. (Gamasoidea, Haemogamasidae).] Mag. Parasit. Moscow 14 1952 : 71-74 figs. 1-2. [In Russian.]

115.—Brennan, J. M. & Jones, E. K. A report on the chiggers (Acarina: Trombiculidae) of the Frances Simes Hastings Natural History Reservation, Monterey County, California. Wassmann J. Biol. 12 1954 : 155-194 1-7.

116.—Breny, R. & Chodjajii, M. Au sujet de la polyphagie de *Tyrophagus longior* Gerv. (Acari-Tyrophagidae.) Parasitica 9 1953 : 69-73 2 figs.

117.—Bristowe, W. S. The Chelicerae of spiders. Endeavour 13 49 1954 : 42-49 figs. 1-10.

Brown, A. W. A. *see* Roy, D. N. 637.

Brown, C. *see* Penner, L. R. 567.

Brown, G. L. *see* Baker, A. D. 55.

Brown, J. H. *see* Bow, M. R. 105.

118.—Brown, V. E. Synopsis of medical entomology. Michigan (Edwards Brothers, Inc.) 1953 219 pp., 136 figs.

119.—Brown, W. L., Blumer, T. N. & Fulton, B. B. The control of *Tyro-*

phagus lintneri (Osb.) in cured hams. Food Technol. 8 6 1954 : 300-301.

120.—Browning, E. The accidental importation of three species of *Torania* into Great Britain, with observations on live specimens (Araneae: Sparassidae). Proc. zool. Soc. Lond. 124 1954 : 213-217 pl. 1 figs. 1-2.

Browning, E. *see* Evans, G. O. 249.

121.—Browning, T. O. Water balance in the tick *Ornithodoros moubata* Murray, with particular reference to the influence of carbon dioxide on the uptake and loss of water. J. exp. Biol. 31 1954 : 331-340 figs. 1-6.

122.—Browning, T. O. On the structure of the spiracle of the tick, *Ornithodoros moubata* Murray. Parasitology 44 1954 : 310-312 fig. 1.

123.—Bücherl, W. Escorpiões e escorpionismo no Brasil. 1. Manutenção dos escorpiões em viveiros e extração do veneno. 2. Atividade das peçonhas de *Tityus serrulatus* e *T. bahiensis* sobre camundongos. Mem. Inst. Butantan 25 1 1953 : 53-108 figs. 1-18. [English summary.]

124.—Bücherl, W. Quilópodes, aranhas e escorpiões enviados do Instituto Butantan para determinação. Mem. Inst. Butantan 25 1 1953 : 109-151 figs. 1-22. [English summary.]

125.—Bücherl, W. Novo processo de obtenção de veneno seco, puro, de *Phoneutria nigriventer* (Keyserling, 1891) e titulação da LD50 em camundongos. Mem. Inst. Butantan 25 1 1953 : 153-174 figs. 1-9. [English summary.]

126.—Bücherl, W. Dosagem comparada da atividade dos extratos glandulares e do veneno puro de *Phoneutria nigriventer* (Keyserling, 1891). Mem. Inst. Butantan 25 2 (1953) 1954 : 1-21.

127.—Bull, P. C. Parasites of the wild rabbit, *Oryctolagus cuniculus* (L.) in New Zealand. N.Z. J. Sci. Tech. 34B 1953 : 341-372 figs. 1-3.

128.—Burgdorfer, W. & Pickens, E. G. A technique employing embryonated chicken eggs for the infection of Argasid ticks with *Coxiella burnetii*, *Bacterium tularense*, *Leptospira icterohaemorrhagiae* and western equine encephalitis virus. J. infect. Dis. 94 1954 : 84-89 fig.

129.—Butler, P. M. The Entomology of Spurn Peninsula. Other invertebrates and vertebrates (continued). [Myriapoda.] Naturalist No. 849 1954 : 74-78.

130.—Buzzard, C. N. Romantic courtships. Country Life 115 1954 : 1995 fig.

131.—Buzzard, C. N. A very shy spider. Country Life 116 1954 : 1162-1163 figs. 1-2.

132.—Buzzard, C. N. The eight-hand juggler. Country Life 116 1954 : 2188-2189 fig.

Byers, G. W. *see* Hairston, N. G. 314.

133.—Calhoun, E. L. Natural occurrence of tularemia in the lone star tick, *Amblyomma americanum* (Linn.), and in dogs in Arkansas. Amer. J. trop. Med. Hyg. 3 2 1954 : 360-366 figs. 1-3.

134.—Calhoun, L., Mohr, L. O. & Alford, H. I. The place of dogs and ticks in the epizootiology of tularemia in Arkansas. J. Parasit. 40 5 Sect. 2 1954 : 28. [Abstract.]

135.—Calza, R. & Sauer, H. F. G. A aranha vermelha dos cafezais. Biologico, S. Paulo 18 12 1952 : 201-208.

136.—Camin, J. H. *Polyaspis berlessei*, a new species of Trachytoid mite (Mesostigmata: Polyaspidae). Bull. Chicago Acad. Sci. 10 2 1954 : 25-33 figs. 1-9.

137.—Camin, J. H. A new species of Uropodine mite, *Polyaspinus higginsii* (Mesostigmata: Trachytoidea: Trachytidae). Bull. Chicago Acad. Sci. 10 3 1954 : 35-41 figs. 1-8.

Cantore, G. *see* Bettini, S. 86.

138.—Caporiacco, L. di. Gli Aracnidi della laguna di Venezia—II Nota. Boll. Soc. venez. Stor. nat. 5 1950 : 114-140 figs. 1-8.

139.—Caporiacco, L. di. Araignées de la Guyane française du Muséum d'Histoire Naturelle de Paris. Comm. pontif. Acad. Sci. 16 3 1954 : 45-193 figs. 1-75.

140.—†Caporiacco, L. di & Denis, J. Descrizione di tre specie di Aracnidi dell' Isola di Zannone. Boll. Zool. 20 1953 : 59-63 figs. 1-5.

141.—Carpenter, F. M. & Darlington, P. J. Jr. NATHAN BANKS, a biographic sketch and list of publications. Psyche 61 1954 : 81-110 photo.

142.—Casals, C. T. Contribucion al estudio del "*Eriophies coryligallarum*" (Targ. y Tozz.). An. Asoc. esp. Progr. Cienc. 14 1949 : 102-108 figs. 1-3.

Castillo de León, B. *see* León, L. A. 452.

143.—Causey, N. B. The millipeds collected in the Pacific Northwest by Dr. M. H. Hatch. Ann. Ent. Soc. Amer. 47 1954 : 81-86 figs. 1-12.

144.—Causey, N. B. New records and species of millipeds from the western United States and Canada. Pan Pacific Ent. 30 1954 : 221-227 figs. 1-5.

145.—Causey, N. B. New Mexican and Venezuelan millipeds in the collection of the Illinois State Natural History Survey. Proc. biol. Soc. Wash. 67 1954 : 55-67 pls. 1-3.

146.—Causey, N. B. Three new species and new records of southern millipeds. Tulane Stud. Zool. 2 4 1954 : 63-68 figs. 1-10.

147.—Chabaud, A. G. *L'Ornithodoros erraticus* (Lucas 1849) multiplicite des races. Ann. Parasit. hum. comp. 29 1954 : 89-130 figs. 1-18.

148.—Chabaud, A. G. & Choquet, M.-T. Nymphes du pentastome *Gigliolla* (n. gen.) *brumpti* (Giglioli 1922) chez un lemurién. Riv. Parassit. 15 1954 : 331-336 figs. 1-2.

Chagin, K. P. *see* Pavlovski, E. N. 564.

Chamberlain, R. W. *see* Sikes, R. K. 677.

149.—Chamberlin, R. V. A new millipede of the genus *Cylindrodesmus* from Palmyra Island. Ent. News 65 1954 : 65-67 fig. 1.

150.—Chamberlin, R. V. Notes on the Chilopod genera *Linotaenia* and *Tomotaenia* with description of a new *Korynia*. Ent. News 65 1954 : 117-122 figs. 1-4.

151.—Chamberlin, R. V. Six new California millipeds. Proc. biol. Soc. Wash. 67 1954 : 231-233.

Chapman, P. J. *see* Lienk, S. E. 462.

152.—[Charitonov, D. E.] [New representative belonging to the genus *Latrodectus* from Turkmenia (*Latrodectus pallidus* O. P. Cambr. subsp. *pavlovskii* N.).] Zool. Zh. 33 1954 : 480-485 figs. 1-2. [In Russian.]

Chebotariov, R. S. *see* Blednikh, A. G. 93.

153.—Chickering, A. M. The spider genus *Mangora* (Argiopidae) in Panama. Bull. Mus. comp. Zool. Harv. 111 1954 : 193–215 figs. 1–28.

154.—Chitwood, B. G. Tardigrades of the Gulf of Mexico. Fish. Bull. U.S. 55 1954 : 325.

Chodjaji, M. *see* Breny, R. 116.

Choquet, M. T. *see* Chabaud, A. G. 148.

Choquette, L. P. E. *see* Rao, N. S. K. 595.

155.—Chrysanthus, P. Spinnen uit Limburg III. Natuurh. Maandbl. 43 5 1954 : 39–40.

156.—Chrysanthus, P. Spinachtigen en duizendpoten. [Wat Leeft en Groeit] Utrecht 1950 : 1–147, 20 photos, 33 figs.

157.—Chrysanthus, P. Spinachtigen-Arachnoidea. I. Nederlandse Spinnen. Wet. Meded. Ned. natuurh. Ver. No. 13 1954 : 1–30 figs. 1–105.

158.—Cicardo, V. H. L'hypertension artérielle produite par le venin de *Latrodectus mactans*. C.R. Soc. Biol., Paris 148 1954 : 1647–1648.

159.—Cilli, V. & Corazzi, G. Recerche sul veleno di alcuni scorpioni eritrei (*Parabuthus liosoma abyssinicus* e *Pandinus magretti*) e sulla preparazione di un antisiero specifico. Bol. Soc. Ital. Med. & Ig. Trop. 6 1946 : 397–406.

Clark, G. *see* Shaw, F. R. 674.

160.—Clifford, H. C. Spraying of cattle as a method of control of cattle ticks and its field application in Arikole District of Uganda. Trop. Agriculture Trin. 31 1954 : 19–26 figs. 1–2.

161.—Cloudsley-Thompson, J. L. Problems of dispersal in some terrestrial arthropods. Advanc. Sci., Lond. 11 41 1954 : 73–75.

162.—Cloudsley-Thompson, J. L. Millipedes entering houses. Ent. mon. Mag. 90 1954 : 19.

163.—Cloudsley-Thompson, J. L. Notes on Arachnida 20.—Some records and observations of spiders and centipedes, etc., made during 1953. 21.—*Scytodes thoracica* (Aran., Scytodidae) in Tunisia. 22.—The function of the

palpal organ of Solifugae. Ent. mon. Mag. 90 1954 : 235–237.

164.—Cloudsley-Thompson, J. L. The ecological significance of diurnal rhythms in terrestrial arthropods. Sci. Progr. 42 165 1954 : 46–52.

165.—Coffey, M. D. A study of some Rocky Mountain spotted fever vectors and their hosts in Utah. Gt. Basin Nat. 14 4 1954 : 31–37.

166.—Cohen, A. E. Arachnidism. J. Allergy 24 1953 : 369–370.

Cole, M. M. *see* Smith, C. N. 683.

167.—Collin, J. & May, R.-M. Reactions adaptatives de Tardigrades a des variations de salinité. C.R. Ass. franç. Av. Sci. 63 1950 : 143–144.

168.—Collins, D. L. & Nardy, R. V. The development and application of spray procedures for controlling the tick *Dermacentor variabilis* Say. Circ. N.Y. St. Mus. No. 26 1951 : 1–37 figs. 1–21.

Colton, M. W. *see* Innes, J. R. M. 375.

169.—Comellini, A. Une araignée nouvelle pour la Suisse: *Physocylus simoni* Berland (Pholcidae). Mitt. schweiz. ent. Ges. 27 1954 : 22.

Complin, J. O. *see* Jeppson, L. R. 385.

170.—Condé, B. Diplopodes pénicillates d'Afrique septentrionale. Bull. Mus. Hist. nat. Paris (2) 26 4 1954 : 496–500.

171.—Condé, B. Les Diplopodes pénicillates de l'ambre et la faune actuelle. Bull. Soc. zool. Fr. 79 1954 : 74–78.

172.—Cook, D. R. Preliminary studies on the Hydracarina of Michigan: The genus *Limnesia*, subgenera *Limnesiopsis* Piersig and *Limnesiella* Daday. Psyche, Camb., Mass. 61 1954 : 146–153 figs. 1–12.

173.—Cook, D. R. Preliminary list of the Arrenuri of Michigan, Part I. The subgenus *Arrenurus*. Trans. Amer. micr. Soc. 73 1954 : 39–58 pls. 1–4.

174.—Cook, D. R. Preliminary list of the Arrenuri of Michigan, Part II. The subgenus *Megaluracarus*. Trans. Amer. micr. Soc. 73 1954 : 367–380 figs. 1–35.

175.—Cooke, J. A. L. Some additions to the county records of spiders. Ent. mon. Mag. 90 1954 : 252–253.

- 176.—Cooreman, J. Acariens du Congo Belge. Ann. Mus. Congo belge N.S. 4to Zool. 1 1954 : 163-168 figs. 1-8.
- 177.—Cooreman, J. Sur un Acarien nouveau, parasite des fosses nasales des oiseaux et remarques sur la famille des Speleognathidae. Ann. Parasit. hum. comp. 29 4 1954 : 426-432 figs. 1-3.
- 178.—Cooreman, J. *Euschöngastia costulata* Willmann, en Belgique (Acari, Trombiculidae). Bull. Ann. Soc. ent. Belg. 89 1953 : 125.
- 179.—Cooreman, J. Notes sur quelques Acariens de la faune cavernicole. Bull. Mus. Hist. nat. Belg. 30 34 1954 : 1-19 figs. 1-8.
- 180.—Cooreman, J. Sur le genre *Kennethiella* n. gen., parasite des Odyneres du genre *Ancistrocerus* Wesmael. Bull. Mus. Hist. nat. Belg. 30 37 1954 : 1-10 figs. 1-12.
- 181.—Cooreman, J. Acariens recueillis dans les grottes de l'Ariège. (Ph. Cauchois et J. Théodorides, avril 1951). Notes Biospéol. 9 1954 : 179-182 figs. 1-4.
- 182.—Cooreman, J. Recherches sur les Hydrachnellae et les Porohalacaridae d'une région de Tourbières, en Belgique. Vol. Jubil. Victor von Straelen, Bruxelles 2 (1925-1954) 1954 : 849-876 pls. 1-2.
- 183.—Cooreman, J. Acariens Cane-striniidae de la collection A. C. Oudemans, a Leiden. Zool. Meded. 33 13 1954 : 83-90 pls. 4-18.
- Cooreman, J. see Vrydagh, J.-M. 775.
- Corazzi, G. see Cilli, V. 159.
- 184.—Cory, E. N., Haviland, E. E. & Atcheson, W. C. Injury to cattleyas by an Eriophyid mite. J. econ. Ent. 46 1953 : 1096-1097.
- 185.—Cotronei, G. Filippo Silvestri: l'Uomo e il Biologo. Boll. Lab. Ent. Agr. Portici 10 1951 : 8-24.
- Cowley, J. see Assis-Fonseca, E. C. M. d' 40.
- 186.—Crabill, R. E. Jr. Concerning *Tomotaenia* and *Paraplanes*, with the description of a new Dignathodontid centipede from Missouri (Chilopoda: Geophilomorpha: Dignathodontidae). Canad. Ent. 86 1954 : 416-419 figs. 1-3.
- 187.—Cranham, J. E., Higgons, D. J. & Stevenson, H. A. p-chlorbenzyl p-chlorphenyl sulphide: a new ovicide for control of red spider. Chem. & Ind. 1953 : 1206-1207.
- 188.—Crisp, D. J. & Hobart, J. A note on the habitat of the marine Tardigrade *Echiniscoides sigismundi* (Schultze). Ann. Mag. nat. Hist. (12) 7 1954 : 554-560 fig. 1.
- 189.—Crome, W. Bananenspinnen. Aquar. u. Terrar. 1 1 1953-1954 : 16-22 7 figs.
- 190.—Crome, W. Beschreibung, Morphologie und Lebensweise der *Eucta kaestneri* sp. n. (Araneae, Tetragnathidae). Zool. Jb. Syst. 82 1954 : 425-452 pls. 6-7 figs. 1-48.
- 191.—Cross, H. F. Feeding tests with blood sucking mites on heparinized blood. J. econ. Ent. 47 1954 : 1154-1155.
- 192.—Cross, H. F. & Wharton, G. W. Techniques for testing the attachment and feeding rate of mites on living hosts. J. econ. Ent. 47 1954 : 1153-1154.
- 193.—Crossley, D. A. & Lipovsky, L. J. Two new chiggers from the Central States. Proc. ent. Soc. Wash. 56 1954 : 240-246 figs. 1-11.
- Cruz, A. da see Sampaio, A. 642.
- 194.—Cumber, R. A. Studies on *Oliarus alkinsoni* Myers (Hem. Cixiidae), vector of the "Yellow leaf" disease of *Phormium tenax* Forst. Habits and environment, with a note on natural enemies. N.Z. J. Sci. Tech. Ser. B. 34 2 1952 : 92-98.
- 195.—Cumber, R. A. Injury to *Phormium* caused by insects, mites and molluscs. N.Z. J. Sci. Tech. 36A 1 1954 : 60-74 figs. 1-19.
- 196.—Daniel, M. & Ludvik, J. Cuticular structures of Ixodidae. 1. Surface structures on the scutum of *Ixodes ricinus* Linné. Mém. Soc. zool. tchéosl. 17 1953 : 266-274 pls. 1-9. [English summary.]
- 197.—Daniel, M. & Ludvik, J. Oberflächenstrukturen des Scutums von *Ixodes ricinus*. Z. Parasitenk. 16 3 1954 : 241-252 figs. 1-7.
- Darlington, P. J. Jr. see Carpenter, F. M. 141.

Davidson, R. H. *see* Ballard, R. C. 59.

198.—Davis, G. E. The relapsing fevers: tick - spirochete specificity studies. *Exp. Parasit.* **1** 1953 : 406-410.

199.—Davis, G. E. & Hoogstraal, H. The relapsing fevers: a survey of the tick-borne spirochetes of Egypt. *J. Egypt. Pub. Hlth. Assoc.* **29** 5 1954 : 139-143.

200.—Davis, J. W. Studies of the sheep mite, *Psorergates ovis*. *Amer. J. vet. Res.* **15** 1954 : 255-257 fig.

201.—Delamare Deboutteville, C. La faune des eaux souterraines littorales des plages de Tunisie. *Vie et Milieu* **4** (1953) 1954 : 141-170 figs. 1-15.

202.—Delamare Deboutteville, C. La faune des eaux souterraines littorales en Algérie. *Vie et Milieu* **4** 1953 : 470-503 figs. 1-14 map.

203.—Denis, J. Araignées des environs du Marcadau et du Vignemale (Hautes-Pyrénées). *Bull. Soc. Hist. nat. Toulouse* **88** 1953 : 83-112 figs. 1-29.

204.—Denis, J. Quelques captures d'araignées Pyrénéennes. *Bull. Soc. Hist. nat. Toulouse* **88** 1953 : 259-266 figs. 1-8.

205.—Denis, J. Araignées recueillies par P. Remy du Sud-Algérien au Hoggar. *Bull. Soc. zool. Fr.* **78** 1954 : 311-324 figs. 1-19.

206.—Denis, J. Notes d'aranéologie marocaine. III.—Quelques Araignées du Massif de l'Ayachi, avec une étude sur les *Tetrax* du Maroc. *Rev. franç. Entom.* **21** 1954 : 132-144 figs. 1-20.

Denis, J. *see* Caporiacco, L. 140.

207.—Derrick, E. H. A Tetranychid mite which may attack man. *Aust. J. Sci.* **17** 1954 : 67-68.

208.—Derrick, E. H. & Womersley, H. The shrub-itch mite of South-east Queensland. *Aust. J. Sci.* **16** 1954 : 238-239 fig. 1.

Dhawan, R. M. *see* Nath, V. 531.

209.—Dias, J. A. Travassos Santos. Subsídios para o estudo da ixodofauna da Ilha da Madeira. *Ann. Inst. Med. trop., Lisboa* **10** 1953 : 261-280 figs. 1-6.

210.—Dias, J. A. Travassos Santos. Nova contribuição para o estudo da

teratologia dos Ixodídeos. *An. Inst. Med. trop., Lisboa* **10** 1953 : 2249-2275 figs. 1-40.

211.—Dias, J. A. Travassos Santos. Alguns dados biológicos sobre o "*Amblyomma nuttalli*" Donitz, 1909. *An. Inst. Med. trop., Lisboa* **10** 1953 : 2277-2286 figs. 1-4.

212.—Dias, J. A. Travassos Santos. Notícia sobre alguns hospedeiros vicariantes do *Ornithodoros moubata* (Murray) em Moçambique. *An. Inst. Med. trop., Lisbon* **11** 1954 : 635-639. [English summary.]

213.—Dias, J. A. Travassos Santos. Estudo sobre alguns *Rhipicephalus* do "grupo *simus*"—"Sub-grupo *plannus*" nov. *Bol. Soc. Estud. Moçambique* **22** 74 1952 : 51-63 figs. 1-5. [English summary.]

214.—Dias, J. A. Travassos Santos. Sobre uma pequena coleção de carraças (Acarina-Ixodoidea) colhidas pelo Dr. F. Zumpt em Moçambique. *Bol. Soc. Estud. Moçambique* **24** 83 1954 : 105-112.

215.—Dias, J. A. Travassos Santos. Um novo ixodídeo do género *Haemaphysalis* C. L. Koch para a fauna de Moçambique *H. parvata* Neumann, 1905. *Bol. Soc. Estud. Moçambique* **24** 86 1954 : 141-152 figs. 1-3.

216.—Dias, J. A. Travassos Santos. Sobre uma nova espécie de carraça do género *Haemaphysalis* Koch, 1844 (Acarina-Ixodoidea) para a fauna de Moçambique. *Mem. Mus. zool. Univ. Coimbra* No. 219, 1953 : 1-7 figs. 1-4.

217.—Dias, J. A. Travassos Santos. Contribuição para o conhecimento da fauna ixodológica do Protectorado de Ruanda-Urundi (Africa Central). *Mem. Mus. zool. Univ. Coimbra* No. 224 1954 : 1-18 figs. 1-3.

218.—Dias, J. A. Travassos Santos. Mais uma nova espécie de carraça do género *Haemaphysalis* C. L. Koch, 1844, para a fauna de Moçambique. *Mem. Mus. zool. Univ. Coimbra* No. 225 1954 : 1-9 figs. 1-5.

219.—Dias, J. A. Travassos Santos. Acerca de uma espécie muito pouco conhecida do "grupo *marmoreum*" (Acarina, Ixodoidea) *Amblyomma poematum* Schulze, 1932. *Moçambique* No. 77 1954 : 121-134 figs. 1-3.

- 220.—Dias, J. A. Travassos Santos. Um novo nome para o *Ixodes loricatus spinosus* Nuttall, 1910 (Nomen. bis lectum). Moçambique No. 79 1954: 79–81.
- 221.—Dias, J. A. Travassos Santos. Sobre uma pequena coleção de Carraças provenientes do Mossurize (Manica e Sofala—Moçambique). Rev. Fac. Cienc. Lisboa (2C) 2 1952: 293–304 figs. 1–4.
- Dias, J. A. Travassos Santos see Vogelsang, E. G. 772, 773.
- Dias, V. S. see Freire, A. A. 271.
- 222.—Donosa, B., R. Ixodoidea de Chile. Rev. Chil. Ent. 3 1953: 132–134.
- 223.—Dosse, G. Über Bekämpfungsmöglichkeiten einiger Spinnmilbenarten mit verschiedenen Akariziden. Anz. Schädlingssk. 27 5 1954: 65–71.
- 224.—Dosse, G. *Tenuipalpus orchidarum* Parfitt nun auch in deutschen Gewächshäusern. Z. angew. Ent. 36 1954: 304–315 figs. 1–10.
- 225.—Downing, R. S. Chemical control of the pear leaf blister mite, *Eriophyes pyri* (Pgst.), in British Columbia. Proc. ent. Soc. Brit. Columbia 51 1954: 7–9.
- 226.—Downing, R. S. Strains of the European red mite, *Metatetranychus ulmi* (Koch), resistant to parathion and malathion in British Columbia. Proc. ent. Soc. Brit. Columbia 51 1954: 10–11.
- 227.—Dresco, E. Sur le genre *Gyas* (Opiliones). Bull. Mus. Hist. nat. Paris (2) 26 1954: 85–92 figs. 1–13.
- 228.—[Dubinin, V. B.] [New classification of Analgesoidea and their position in the Order Acariformes A. Zachv. 1952.] Bull. Acad. URSS ser. biol. 1954 No. 4 59–75. [In Russian.]
- 229.—[Dubinin, V. B.] [Parasitic fauna of Muridae and its changes in Volga delta.] Mag. Parasit., Leningr. 15 1953: 252–301. [In Russian.]
- 230.—[Dubinin, V. B.] [Some principles in geographical distribution and evolution of feather-mites in connection with the evolution of their hosts.] Trav. Inst. zool. Acad. Sci. U.R.S.S. 13 1953: 289–309 figs. 1–7.
- 231.—Duffey, E., Locket, G. H. & Millidge, A. F. On some spiders collected in East Suffolk and Essex. Ann. Mag. nat. Hist. (12) 7 1954: 474–478 1 fig.
- 232.—Duffey, E. & Millidge, A. F. *Centromerus incilium* (L. Koch), a Linyphiid spider taken near Oxford, with notes on related species. J. Soc. Brit. Ent. 4 1954: 218–223 figs. 1–2.
- 233.—Dutt, M. K. Chromosome studies on *Rhipicephalus sanguineus* Latreille and *Hyalomma aegyptium* Neumann (Acarina: Ixodidae). Curr. Sci. 23 6 1954: 194–196 figs. 1–10.
- 234.—Duvigneaud, J. Découverte à Dinant de l'Araignée-Frelon (*Argiope bruennichi* Scopoli). Nat. belges 34 7–8 1953: 131–135 figs. 1–4.
- 235.—Düzgünes, Z. Important mites in Turkey. Tomureuk, Istanbul 2 24 1953: 7.
- 236.—Ebeling, W. & Pence, R. J. Susceptibility to acaricides to two-spotted spider mites in the egg, larval and adult stages. J. econ. Ent. 47 1954: 789–795.
- 237.—Edgar, S. A., Little, C. D. & Herndon, J. F. Control of the fowl tick, *Argas persicus* (Oken), on an Alabama poultry farm. J. Amer. Vet. Med. Assoc. 123 920 1953: 446–447.
- Edgington, B. H. see Bell, D. S. 79.
- 238.—Edmunds, L. R. An additional record of the lone-star tick, *Amblyomma americanum* (Linn.) in Ohio. Ohio J. Sci. 54 1954: 98.
- 239.—Ehara, S. Two new spider mites parasitic on Japanese conifers. Annot. zool. jap. 27 1954: 102–106 figs. 1–10.
- 240.—Eichler, W. Milben an Mallophagen. Riv. Parassit. 15 1954: 391–394 figs. 1–4.
- 241.—Ellis, L. L. Jr. A tentative key to the Mammalian ectoparasites of the Wichita Mountains Wildlife refuge. Proc. Okla. Acad. Sci. 33 1952: 111–115.
- Ellis, L. L. see Wilcomb, M. J. Jr. 795.
- 242.—[Emchuk, E. M.] [Contribution to the biology of *Ixodes laguri laguri*.] Rep. Acad. Sci. Ukr. 2 1954: 99–102. [In Ukrainian with Russian summary.]

243.—English, L. L. & Tinker, M. E. The effect of DDT sprays on mite and aphid populations on elms. *J. econ. Ent.* 47 1954 : 658-660.

244.—Enigk, K. Zur Biologie der Zecken. Dtsch. Entomologentag Hamb. 1953 Jena 1954 : 96-102.

245.—Evans, G. O. A revision of the genus *Thinoseius* Halbert, 1920. (Acarina-Laelaptidae.) *Ann. Mag. nat. Hist.* (12) 7 1954 : 615-622 figs. 1-12.

246.—Evans, G. O. On the genus *Asternolaelaps* Berlese, 1923. (Acarina-Mesostigmata.) *Ent. mon. Mag.* 90 1954 : 88-90 figs. 1-6.

247.—Evans, G. O. Some new and rare species of Acarina. *Proc. zool. Soc. Lond.* 123 1954 : 793-811 figs. 1-39.

248.—Evans, G. O. The genus *Iphiseius* Berl. (Acarina-Laelaptidae.) *Proc. zool. Soc. Lond.* 124 1954 : 517-526 figs. 1-13.

249.—Evans, G. O. & Browning, E. *Pseudoscorpiones*. Synopses Brit. Fauna, Linn. Soc. Lond. No. 10 1954 : 1-23 figs. 1-24.

Evans, T. M. *see* Traub, R. 733.

250.—Eyndhoven, G. L. van. Le mâle de *Nycteridocoptes poppei* (Acar.). *Ent. Ber. Amst.* 15 1954 : 140-143 figs. 1-10.

251.—Eyndhoven, G. L. van. Invasie van Spintmijten (Acar., Tetr.). *Ent. Ber. Amst.* 15 1954 : 221-222.

252.—Ewer, D. W. & Berg, R. van der. A note on the pharmacology of the dorsal musculature of *Peripalopsis*. *J. exp. Biol.* 31 1954 : 497-500 fig. 1.

253.—Fage, L. Remarques sur la distribution géographique des Pédipalpes Amblypyges africains, accompagnées de la description d'une espèce nouvelle de Madagascar: *Charinus madagascariensis* nov. sp. *Ann. Mus. Congo belg. N.S. 4to Zool.* 1 1954 : 180-184 figs. 1-3.

Faia, M. M. *see* Sampaio, A. 642.

254.—Fain, A. Notes sur les Acariens du genre *Pneumonyssus* au Congo Belge. Description de *Pneumonyssus congoensis* Ewing. *Ann. Mus. Congo belg. N.S. 4to Zool.* 1 1954 : 185-192 figs. 1-4.

Fain, A. *see* Jadin, J.-B. 378.

255.—Feider, Z. Quelques acariens de la groupe Prostigmata inférieurs. *Studii Cercet. Stünt.* 5 1-2 1954 : 364-375 figs. 1-28.

256.—Feldman-Muhsam, B. *Rhipicephalus bursa* in Israel. *Bull. res. Coun. Israel* 3 3 1953 : 201-206 figs. 1-8.

257.—Feldman-Muhsam, B. Revision of the genus *Hyalomma*. I—Description of Koch's types. *Bull. res. Coun. Israel* 4 2 1954 : 150-170 figs. 1-5.

258.—Fichter, E. An ecological study of invertebrates of grassland and deciduous shrub savanna in eastern Nebraska. *Amer. midl. Nat.* 51 1954 : 321-439 figs. 1-36.

259.—Fiedler, O. G. H. & Toit, R. du. Australian itch. A note on its occurrence in South Africa. *J. S. Afr. vet. Med. Ass.* 25 2 1954 : 21-22.

Field, H. M. *see* Levi, H. W. 458.

260.—[Filippova, N. A.] [Diagnosis of some species of ticks belonging to the genus *Ixodes* (subgenus *Ixodes* s. str.) according to the larval and nymphal stages.] *Zool. Zh.* 33 1954 : 69-76 figs. 1-16. [In Russian.]

261.—[Filippova, N. A.] [On the diagnosis of the tick *Ixodes (Exopalpiger) trianguliceps* Bir. based on the larva and nymph.] *Zool. Zh.* 33 1954 : 1053-1057 figs. 1-2. [In Russian.]

262.—Firstman, B. The central nervous system, musculature, and segmentation of the cephalothorax of a tarantula (*Eurypelma californicum* Ausserer). *Microentomology* 19 1954 : 14-40 figs. 9-25.

Fischer, A. G. *see* Moore, R. C. 518.

263.—Fjeldalen, J. Midder på frukttraer og bærockster. *Biologi og bekjemping. Frukt og Baer* 5 1952 : 56-72 8 figs.

264.—Fleschner, C. A. & Ricker, D. W. Typhlodromid mites on citrus and Avocado trees in southern California. *J. econ. Ent.* 47 1954 : 356-357.

Fleschner, C. A. *see* Ricker, D. W. 610.

265.—Floch, H. Rapport sur le fonctionnement technique de l'Institut Pasteur de la Guyane française et du Territoire de l'Inini pendant l'année 1952. *Rapp. Inst. Pasteur Guyane*

franç. Pub. No. 288 1953 : 1-255.
[Acari: 60 & 244.]

266.—Fonseca, F. da & Aragão, H. B. Notas de ixodologia. VI—Descrição da fêmea de *Amblyomma multipunctum*, Neumann 1899 e redescricao do macho (Acari: Ixodidae). Mem. Inst. Osw. Cruz 51 1954 : 493-498 pls. 1-4.

267.—Fonseca, F. da. Notas de Acarologia XXXVI. Aquisições novas para a fauna brasileira de ácaros hematófagos (Acari, Macronyssidae). Rev. Brasil. Ent. 1 1954 : 79-92 figs. 1-8.

Fonseca, F. da see Aragão, H. B. 31, 32.

268.—Fontaine, A. Parasitic mites on hermit crabs. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 65 1954 : 76 fig.

Francis, T., Jr. see Penner, L. R. 567.

269.—Franz, H. Ein weitere neue *Allocaeculus*-Art nebst Bemerkungen über bekannte Vertreter der Caeculidae (Acari). Bonn. zool. Beitr. 5 1954 : 210-212 figs. 1-2.

270.—Franz, H. Die Nordost-Alpen. 15. Ordnung Acarina. SPIEGEL Land-Tierwelt Innsbruck 1 1954 : 329-452.

Franz, H. see Wiehle, H. 794.

271.—Freire, A. A. & Dias, V. S. Elementos para o estudo das dermatoses bovinas de Angola. *Demodex bovis* (Stiles, 1892). An. Serv. Vet. Ind. An. Col. Angola 1 1947 : 247-258.

272.—Fritsch, W. Über Vogelmilben. Mikrokosmos 44 1 1954 : 3-8 figs. 1-8.

273.—Fritsch, W. Die Milbengattung *Harpyrhynchus* Mégnin 1878 (Subordo Trombidiformes, Fam. Myobiidae Mégn. 1877). Zool. Anz. 152 1954 : 177-198 figs. 1-13.

274.—Fukuzumi, S. & Obata, Y. On five new species of Trombiculid mites (Acarina) recovered in Miyake-jima Island. Kitasato Arch. exp. Med. 26 1953 : 1-22 figs. 1-5.

274a.—Fuller, H. S. Studies of rickettsialpox. III. Life cycle of the mite vector, *Allodermanyssus sanguineus*. Amer. J. Hyg. 59 1954 : 236-239.

274b.—Fuller, H. S. Experimental epidemiology in relation to arthropod-borne disease. J. econ. Ent. 47 1954 : 420-429.

Fulton, B. B. see Brown, W. L. 119.

275.—Furman, D. P. A revision of the genus *Pneumonyssus* (Acarina: Halarachnidae). J. Parasit. 40 1954 : 31-42 figs. 1-16.

276.—Furman, D. P. A new species of *Androlaelaps* from *Perognathus* in Southern California (Acarina: Laelaptidae). Pan-Pacific Ent. 30 1954 : 119-124 figs. 1-7.

277.—Gabe, M. Particularités histologiques de la "glande cérébrale" de *Scutigera coleoptrata* L. Bull. Soc. zool. Fr. 78 1954 : 338.

278.—Gabe, M. Données histologiques sur l'appareil digestif des Onychophores. Bull. Soc. zool. Fr. 79 1954 : 141-150 pl.

279.—Gabe, M. Sur l'existence de cellules neuro-sécrétrices chez quelques Onychophores. C.R. Acad. Sci. Paris 238 1954 : 272-274.

280.—Gabe, M. Emplacement et connexions des cellules neurosécrétrices chez quelques Aranéides. C.R. Acad. Sci. Paris 238 1954 : 1265-1267.

281.—Gabe, M. Situation et connexions des cellules neurosécrétrices chez *Phalangium opilio* L. C.R. Acad. Sci. Paris 238 1954 : 2450-2452.

282.—Gabe, M. Emplacement et connexions des cellules neuro-sécrétrices chez quelques Diplopodes. C.R. Acad. Sci. Paris 239 1954 : 828-830.

Gaiberger, K. see Benda, R. 80.

Gaines, R. C. see Young, M. T. 819.

283.—Galoux, A. L'apparition en Belgique d'un acarien parasite du genre *Picea* (*Parateiranychus ununguis* Jacobi). Bull. Soc. R. Forestr. Belg. 61 10 1954 : 419-423.

Garcia, I. see Lissitzky, S. 465.

284.—Garnett, W. J. Freshwater microscopy. London (Constable & Co. Ltd.) 1953, 300 pp., 51 pls. [Arach. & Tardig. 244-249.]

Geary, J. M. see Philip, C. B. 577.

285.—Geigy, R., Wagner, O. & Aeschlimann, A. Transmission génitale de *Borrelia duttoni* chez *Ornithodoros moubata*. Acta trop. 11 1 1954 : 81-82.

286.—George, V. P. On some arthropod microfossils from India. Agra Univ. J. Res. Sci. 1 1952 : 83-108 figs. 1-79.

- 287.—Gerlach, A. Das Suprakontinental der sandigen Meeresküsten als Lebensraum einer Mikrofauna. *Kieiser Meeresforsch.* 10 1954: 121-129 pl. 45.
- Gibson, K. E. *see* Landis, B. J. 430.
- Gilbert, I. H. *see* Smith, C. N. 683.
- Gilbert, O. *see* Mason, B. 491.
- Gill, G. D. *see* Philip, C. B. 577.
- 288.—Gilmour, E. F. Plant galls. The Yorkshire Naturalists' Union: Ninety-Second Annual Report. Naturalist No. 848 1954: 5-31. [Acari: 24-25.]
- 289.—Gisin, H. Pauropodes nouveaux pour la Suisse. *Myriap. Mitt. Schweiz. ent. Ges.* 27 1954: 55.
- Gonzaga e Lordello, L. *see* Boock. O. J. 98.
- 290.—González T., L. *Lutrodictus macaroni mexicanus* subsp. nov. *An. Inst. Biol. Univ. Méx.* 24 1953: 1954: 455-457 fig. 1.
- Good, N. E. *see* Pratt, H. D. 582.
- 291.—Goodnight, C. J. & Goodnight, M. L. The Oribatid fauna of an isolated volcano in southeastern Veracruz. *Trans. Amer. micr. Soc.* 73 1954: 344-350 figs. 1-5.
- 292.—Goodwin, M. H. Jr. Observations on the biology of the lizard mite *Geshobrella texana* Banks, 1904 (Acarina: Ptyergosomidae). *J. Parasit.* 40 1954: 54-59 fig. 1.
- 293.—Götz, B. & Madel, W. Über starkes Auftreten der "Roten Spinne" an Reben und Versuche zu ihrer Bekämpfung. *Anz. Schädlingsk.* 23 1950: 89-90 figs. 1-2.
- Gouck, H. K. *see* Smith, C. N. 683.
- 294.—Gould, D. J. & Miesse, M. L. Recovery of a *Rickettsia* of the spotted fever group from *Miconus pennsylvanicus* from Virginia. *Proc. Soc. exp. Biol.* 85 1954: 558-561.
- 295.—Grandjean, F. Les Enarthronota. *Ann. Sci. nat. Zool.* (11) 16 1954: 311-335 figs. 1-7.
- 296.—Grandjean, F. Sur les nombres d'armes aux appendices des acariens Actinotrichineux. *Arch. Sci. Genève* 7 1954: 335-362.
- 297.—Grandjean, F. Observations sur les Oribates (28e série). *Bull. Mus. Hist. nat. Paris* (2) 26 1954: 204-211 figs. 1-2.
- 298.—Grandjean, F. Observations sur les Oribates (30e série). *Bull. Mus. Hist. nat. Paris* (2) 26 1954: 482-490 figs. 1-2.
- 299.—Grandjean, F. Observations sur les Oribates (31e série). *Bull. Mus. Hist. nat., Paris* (2) 26 1954: 582-589 figs. 1-2.
- 300.—Grandjean, F. Essai de classification des Oribates. (Acariens.) *Bull. Soc. zool. Fr.* 78 1954: 421-446.
- 301.—Grandjean, F. Au sujet des caracteres sexuels secondaires des Oribates Acariens. *C.R. Acad. Sci. Paris* 239 1954: 1747-1750.
- 302.—Grandjean, F. Etude sur les Palaeacaroïdes (Acariens, Oribates). *Mém. Mus. Hist. nat. Paris ser. A Zool.* 73 1954: 179-274 figs. 1-25.
- 303.—Grandjean, F. *Pseudomacropus nematophorus* n.g., n.sp. *Rev. franç. Entom.* 21 4 1954: 294-301 figs. 1-5.
- Granett, P. *see* Haynes, H. L. 323.
- 304.—Gray, P. The microtomist's formulary and guide. (Constable & Co., Ltd.) London 1954: pp. xiii + 794 illustr.
- 305.—Green, J. A new species of *Leptothrips* and other pteromalids (Acari) in Windermere. *Proc. zool. Soc. Lond.* 124 1954: 669-674 figs. 1-2.
- 306.—Gregson, J. D. The male of *Ixodes signatus* Birula (Acarina: Ixodidae). *Canad. Ent.* 86 1954: 275-277 fig. 1.
- 307.—Gregson, J. D. Insects, ticks and mites attacking livestock and man. *Proc. 7th Pacif. sci. Congr.* 4 1953: 141-146.
- Griffith, M. E. *see* Wharton, M. J. Jr. 795.
- 308.—Griffith, R. D. & Wenz, G. F. Mite injury to sorghum in the Lower Rio Grande valley of Texas. *J. econ. Ent.* 46 1953: 1112-1113 fig. 1.
- Grokhovskaya, I. M. *see* Piontkovskaya, S. P. 580.
- 309.—Gubička, J. *Leptothrips mariae* n. sp. nový druh z řady Shrenkiae. *Biol. Sb. Bratislava* 7 1952: 177-186 figs. 1-2. [German summary.]

310.—Gurr, L. A note on the occurrence of *Linguatula serrata* (Frohlich, 1789) in the wild rabbit, *Oryctolagus cuniculus*, in New Zealand. N.Z. J. Sci. Tech. **35B** 1953 : 49–50.

Gusev, V. M. *see* Ter-Vartanov, V. N. 724.

Guseva, A. A. *see* Ter-Vartanov, V. N. 724.

311.—Habeeb, H. North American Hydrachnellae, Acari I–V. Leaf. Acadian Biol. No. 1 1953 : 1–16. [Not seen.]

312.—Hackman, W. The spiders of Newfoundland. Acta zool. fenn. **79** 1954 : 1–99 figs. 1–121.

313.—Hackman, W. Spindlar nya för Finlands Fauna. Memor. Soc. Fauna Flora fenn. **29** 1954 : 23–24.

314.—Hairston, N. G. & Byers, G. W. The soil arthropods of a field in southern Michigan: a study in community ecology. Contr. Lab. Vertebr. Biol. Univ. Mich. No. 64 1954 : 1–37.

315.—Hammer, M. Collemboles and Oribatids from Peary Land (North Greenland). Medd. Grønland **127** 5 1954 : 1–28 figs. 1–10.

316.—Handschin, von E. Ehrenfried Schenkel 1869–1953. Verh. Naturf. Ges. Basel **65** 1954 : 1–6 photo.

317.—Handschin, E. & Roch, R. I. *Euscorpis italicus*: II. *Latrodectus conglobatus*: XIV. *Sarcoptes scabiei*: XV. *Trombicula autumnalis*: XVI. *Haemaphysalis punctata*. Tabulae entomologicae Basel [1953] 5 pp. 5 pls.

318.—Hantsbarger, W. M. & O'Neill, W. J. Predaceous mites of the family Laelaptidae in North-central Washington. J. econ. Ent. **47** 1954 : 176–177.

319.—Harrison, J. L. A family of the great black scorpion (*Heterometrus longimanus*). Malayan Nat. J. **9** 1954 : 31–32 pl.

320.—Harrison, J. L. Malaysian parasites X. Feeding times of Trombiculid larvae. Stud. Inst. med. Res. F.M.S. No. 26 1954 : 171–183 figs. 1–5.

Harrison, J. L. *see* Audy, J. R. 44.

Harrison, J. L. *see* Tweedie, M. W. F. 741.

321.—Harvey, T. L. Chemical control of a spider mite on wheat in Eastern New Mexico. J. econ. Ent. **47** 1954 : 593–597 figs. 1–3.

322.—Hassan, A. I. The Oecobiidae of Egypt. Bull. zool. Soc. Egypt No. 11 1953 : 14–30 figs. 1–4.

Haviland, E. E. *see* Cory, E. N. 184.

323.—Haynes, H. L., Granett, P., Sacktor, B. & Bowery, T. G. A butoxy-polypropylene glycol to control the European red mite on apples. J. econ. Ent. **46** 1953 : 1020–1025.

324.—Hedgpeth, J. W. On the phylogeny of the Pycnogonida. Acta zool., Stockh. **35** 1954 : 193–213 figs. 1–9.

325.—Hedgpeth, J. W. Xiphosura.—Gulf of Mexico—its origin, waters, and marine life. Fish. Bull. U.S. **55** 1954 : 423.

326.—Hedgpeth, J. W. Pycnogonida.—Gulf of Mexico—its origin, waters, and marine life. Fish. Bull. U.S. **55** 1954 : 425–427 fig.

327.—Heidt, J. H. A report on a case of tick paralysis in Dade County, Florida. Florida Ent. **37** 1954 : 149–150.

328.—Heisch, R. B. First record of *Argas reflexus* (Fabricius) Latreille, 1796 from East Africa. E. Afr. med. J. **31** 1954 : 89–91 figs. 1–3.

329.—Heisch, R. B. *Ornithodoros erraticus* (Lucas) in ant-chat burrows. E. Afr. med. J. **31** 1954 : 264.

330.—Henning, M. W. Q fever. J.S. Afr. vet. med. Ass. **24** 1953 : 219–239.

331.—Henry, L. M. The cephalic nervous system and segmentation in the Pedipalpida and the Solpugida (Arachnida). Microentomology **19** 1954 : 2–13 figs. 1–8.

Herman, F. *see* Jadin, J.-B. 378, 379.

Herndon, J. F. *see* Edgar, S. A. 237.

Higsons, D. J. *see* Cranham, J. E. 187.

332.—Hinschberger, A. Symphytes d'Afrique tropicale. Publ. Cult. Comp. Diam. Angola No. 23 1954 : 13–34 figs. 1–58.

333.—Hinschberger, A. Symphytes du Congo belge. Rev. zool. Bot. afr. **49** 1954 : 350–352.

334.—Hirschmann, W. Gleiche Samenüberträger bei Spinnen und Milben. Mikrokosmos **43** 1954 : 106–109 4 figs.

335.—Hirschmann, W. Das Lückensystem der Bäume—ein wenig beachteter Lebensraum. *Mikrokosmos* 43 1954 : 246–248 figs. 1–8.

336.—Hirschmann, W. & Rühm, W. Milben und Fadenwürmer als Symphoristen und Parasiten des Buchdruckers (*Ips typographus*). *Nachr. naturw. Mus. Aschaffenh.* No. 43 1954 : 41–50 pls. 7–13.

337.—Hitchcock, L. F. Resistance of cattle tick (*Boophilus microplus* (Canestrini)) to benzene hexachloride. *Aust. J. agric. Res.* 4 3 1953 : 360–364.

338.—Hobart, J. & Whalley, P. E. S. Occurrence of a species of *Ornithodoros* in Britain. *Nature, Lond.* 174 1954 : 936.

Hobart, J. *see* Crisp, D. J. 188.

339.—Hoff, C. C. Two new species of Pseudoscorpions from Illinois. *Trans. Ill. Acad. Sci.* 45 1952 : 188–195 figs. 1–4.

340.—Hoffman, R. L. A new milliped of the genus *Colactis* from Mexico (Chordeumida, Lysioptelidae). *Amer. Mus. Novit.* No. 1673 1954 : 1–4 figs. 1–5.

341.—Hoffman, R. L. Further studies on American millipeds of the family Euryuridae (Polydesmida). *J. Wash. Acad. Sci.* 44 1954 : 49–58 figs. 1–4.

342.—Hoffman, R. L. An introduction to the study of the millipeds of Jamaica. *Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 64 1954 : 57–59.

343.—Hoffman, R. L. Introduction to the study of the millipeds of Jamaica (Part II). *Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 65 1954 : 85–87 figs. 1–5.

344.—Hoffman, R. L. Introduction to the study of the millipeds of Jamaica (part III). *Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 66 1954 : 103–105 figs. 1–6.

345.—Hoffman, R. L. Introduction to the study of the millipeds of Jamaica (Part IV). *Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 67 1954 : 131–133 figs. 1–5.

346.—Hoffman, R. L. Introduction to the study of the millipeds of Jamaica (Parts V & VI)—*Nat. Hist. Notes nat.*

Hist. Soc. Jamaica No. 68 1954 : 153–155 figs. 1–6; No. 69 1954 : 175–177 figs. 1–7.

347.—Hoffman, R. L. On three poorly-known neotropical milliped genera (Polydesmida). *Proc. ent. Soc. Wash.* 56 1954 : 215–221 figs. 1–5.

348.—Hoffmann, A. Contribuciones al conocimiento de los Trombiculidos Mexicanos. *Ciencia, Mex.* 10 1950 : 148–153 figs. 1–12.

349.—Hoffmann, A. Contribuciones al conocimiento de los Trombiculidos Mexicanos (3a parte). *Ciencia, Mex.* 11 1951 : 29–36 figs. 1–14.

350.—Hoffmann, A. Contribuciones al conocimiento de los Trombiculidos Mexicanos (4a parte). *Ciencia, Mex.* 11 1951 : 97–103 figs. 1–7.

351.—Hoffmann, A. Contribuciones al conocimiento de los Trombiculidos Mexicanos (5a parte). *Ciencia, Mex.* 12 1952 : 87–94 figs. 1–18.

352.—Holdhaus, K. Die Spuren der Eiszeit in der Tierwelt Europas. *Abh. zool.-bot. Ges. Wien* 18 1954 : 1–493 pls. 1–52, map. [Pseudoscorpiones 231, Opiliones 231, Araneae 231, 311, Acari 311, Diplopoda 232.]

353.—Holtedahl, O. Norges Geologi. *Norg. geol. Unders.* 164 1 1953 : 178–232 fig. 82.

354.—Hoogstraal, H. Ticks (Ixodoidea) and their medical relations in the Near East. *J. Egypt. Pub. Hlth. Assoc.* 29 1–2 1954 : 1–8.

355.—Hoogstraal, H. *Ixodes (Ceratixodes) uriae* White, 1852, parasitizing penguins and sea birds in the Falkland Islands (Ixodoidea, Ixodidae). *J. Parasit.* 40 1954 : 232.

356.—Hoogstraal, H. A preliminary annotated list of ticks (Ixodoidea) of the Anglo-Egyptian Sudan. *J. Parasit.* 40 1954 : 304–310 fig. 1.

357.—Hoogstraal, H. Ground-squirrel parasitizing ticks of Africa. *J. Parasit.* 40 5, Sect. 2 1954 : 28. [Abstract.]

358.—Hoogstraal, H. Noteworthy African tick records in the British Museum (Natural History) Collections. *Proc. ent. Soc. Wash.* 56 1954 : 273–279.

359.—Hoogstraal, H., Salah, A. A. & Kaiser, M. N. Summary of the known distribution and biology of *Ornithodoros*

erraticus (Lucas 1849) (Ixodoidea, Argasidae in Egypt. J. Egypt. Pub. Hlth. Assoc. 29 5 1954: 127-138 fig. 1.

Hoogetraal, H. see Davis, G. E. 199.

360.—Hogg, E. E. Beiträge zur Kenntnisweise einiger Acanthosoma auf der im Spinnweben *Pentatomus* *gibbus* (Linn. et Fenn. und *Pentatomus* *urticae* Koch. Z. angew. Zool. 1954: 269-286 figs. 1-5.

361.—Horen, W. P. Modified flag for tick collecting. Pan-Pacific Ent. 30 1954: 112.

362.—Hotchkiss, N. Wildlife Abstracts 1935-51. An annotated bibliography of the publications abstracted in the Wildlife Review Nos. 1-46. Washington, D.C. (U.S. Fish & Wildlife Service) 1954, pp. iv + 434.

363.—Hughes, A. M. On a new species of *Parasitaphys* belonging to the family Parasitaphysidae (Anisotoma, Ixodoidea). Proc. zool. Soc. Lond. 124 1954: 1-12 figs. 1-17.

364.—Hughes, T. E. Some histological changes which occur in the gut epithelium of *Ixodes ricinus* females during gorging and up to oviposition. Ann. trop. Med. Parasit. 48 1954: 397-404 pls. 15-17.

365.—Hughes, T. E. The internal anatomy of the mite *Limonys leuckarti* (Pagenstecher, 1861). Proc. zool. Soc. Lond. 124 1954: 239-256 figs. 1-19.

366.—Hunter, G. W. M. H. Phelps, F. M., Moon, A. P., Badka, M. G., Williams, J. S., Shamer, D. H. & Padilla, G. M. Studies on the Lone Star tick. III Results of additional post tests of potential Anisotoma (Trombiculidae). J. Parasit. 40 5, Sect. 2 1954: 30. [Abstract.]

Hunter, G. W. see Mackie, T. T. 480.

Hunter, G. W. see Therrien, A. A. 727.

Hurlbut, H. S. see Taylor, B. M. 719.

367.—Hyatt, K. H. The African spiders of the family Oenidae in the collections of the British Museum (Natural History). Ann. Mag. nat. Hist. (12) 7 1954: 877-894 pls. 30-32 figs. 1-12.

368.—Hyatt, K. H. The Arachnida collected by the British Schools Exploring Society Expedition to Iceland in

1951 and 1952. Ent. mon. Mag. 90 1954: 222.

369.—Iglsinsky, W. Jr. & Rainwater, C. F. Life history and habits of *Tetranychus desertorum* and *bimaculatus* on cotton. J. econ. Ent. 47 1954: 1084-1086.

370.—Imamura, T. Studies on water mites from Hokkaido. J. Hokkaido Gakugei Univ. Sect. B Suppl. No. 1 1954: 1-148 figs. 1-85.

371.—Imamura, T. Some stenopodius water mites from Niigata Prefecture. J. Hokkaido Gakugei Univ. Sect. B Suppl. No. 1 1954: 149-164 figs. 1-9.

372.—Imamura, T. On a water-mite, *Pirata (Pirata) urvus* (Koch), found in the Ozegahara Moor. Sci. Res. Ozegahara Moor, Tokyo 1954: 709-713 figs. 1-2.

373.—Immel, V. Zur Biologie und Physiologie von *Nemastoma quadripunctatum* (Opiliones, Dyspnoi). Zool. Jb. Syst. 83 1954: 129-184 figs. 1-47.

374.—Ineson, M. J. A comparison of the parasites of wild and domestic pigs in New Zealand. Trans. roy. Soc. N.Z. 82 1954: 579-609 fig. 1.

375.—Innes, J. R. M., Colton, M. W., Yevick, P. P. & Smith, C. L. Lung mites. Pulmonary acariasis an enzootic disease caused by *Parasitaphys similes* in imported monkeys. Amer. J. Path. 30 1954: 813-835 figs. 1-13.

376.—Jacobi, H. P. Beitrag zur Kenntnis der Spinnweben von Gelsenbein Rheingen und Umgebung. Jb. Nassau. Ver. Naturh. 91 1954: 53-64.

377.—Jadin, J. B. & Vercammen-Grandjean, P. H. Cinq nouvelles espèces de Trombiculidae (Acarina), Trombiculidae du Ruanda-Urundi, et création d'un genre nouveau: *Schoutedenichia*. Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954: 194-206 figs. 1-6.

378.—Jadin, J.-B., Vercammen-Grandjean, P.-H., Herman, F., Tchien-pont & Fain, A. Deux Trombiculidae nouveaux parasites du Ruanda-Urundi. Rev. Zool. Bot. afr. 49 1954: 9-12 figs. A-E.

379.—Jadin, J.-B., Vercammen-Grandjean, P.-H. & Herman, F. Un Trombiculidae nouveau. (Ac-

arina.) Rev. Zool. Bot. afr. **49** 1954 : 273-282.

380.—Jadin, J.-B. & Vercammen-Grandjean, P. H. Deux Trombiculidae larvaires parasites, hypodermes de certains Rongeurs. (Trombididae-Acarina.) Rev. Zool. Bot. afr. **49** 1954 : 283-292 figs. 1-4.

James, A. B. see Baker, A. D. **55**.

381.—Jameson, E. W. Jr. & Toshioka, S. Notes on some chiggers (Acarina: Trombiculidae) from Southern Korea. Pacif. Sci. **8** 1954 : 11-22 figs. 1-6.

Jameson, E. W. Jr. see Sasa, M. **646**.

382.—Jancke, G. D. Milbeneier an Steinen. Zool. Anz. **153** 1954 : 188-190 figs. 1-3.

383.—Jeekel, C. A. W. Migrating millipeds in Malaya. Ent. Ber., Amst. **15** 1954 : 28-29.

384.—Jeekel, C. A. W. Duizendpoot-achtigen—Myriopoda. I. De millioen-poten (Diplopoda) van Nederland. Wet. Meded. Ned. natuurh. Ver. No. **9** 1953 : 1-22 2 pls.

385.—Jeppson, L. R., Jessor, M. J. & Complin, J. O. Seasonal weather influence on efficiency of systox applications for control of mites of lemons in Southern California. J. econ. Ent. **47** 1954 : 520-525.

Jeppson, L. R. see Riehl, L. A. **611**.

Jessor, M. J. see Jeppson, L. R. **385**.

386.—Johnson, B. M. A new species of milliped, genus *Dixidesmus*, from Michigan. Nat. Hist. Misc. No. **137** 1954 : 1-5 fig. 1.

387.—Johnson, B. M. The millipeds of Michigan. Pap. Mich. Acad. Sci. **39** 1954 : 241-252 pls. 1-7.

388.—Jolivet, P. Arthropodes récoltés à Cabrera (1). Vie et Milieu **4** 1953 : 553-555 map.

389.—Jones, B. M. On the rôle of the integument in acarine development and its bearing on pupa-formation. Quart. J. micr. Sci. **95** 1954 : 169-181 1 pl. figs. 1-6.

Jones, E. K. see Brennan, J. M. **115**.

390.—Jones, R. W. & Lohrman, R. Contamination of fungus cultures by *Tyroglyphus lintneri*. J. Invest. Dermatol. **22** 4 1954 : 265-266 figs.

Jones, R. W. see Booth, B. H. **99**.

391.—Judd, W. W. Some records of ectoparasitic Acarina and Insecta from mammals in Ontario. J. Parasit. **40** 1954 : 483-484.

392.—Jugeau, L. Symphytes du Sud-Ouest de la France, avec description d'une espèce nouvelle. Bull. Mus. Hist. nat. Paris (2) **26** 1954 : 100-103 figs. 1-11.

393.—Jugeau, L. Contribution à l'étude des Symphytes du Cameroun. Bull. Mus. Hist. nat., Paris (2) **26** 1954 : 593-595 figs. 1-11.

394.—Kaczmarek, J. Materials to the knowledge of *Lithobiomorpha* of the island of Wolin and some other parts of Pomerania. Wydz. mat.-pracy. Kom. Biol. **15** 4 1954 : 1-23. [In Polish with English summary.]

Kaiser, M. N. see Hoogstraal, H. **359**.

395.—Kamo, H. On a new species of trombiculid mites, *Mackiena todayi* sp. nov. from birds in Kyushu (Acarina: Trombiculidae). Kyushu Mem. med. Sci. **4** 2-3 1953 : 199-204 figs.

396.—Kantack, E. J. & Knutson, H. Locations of maximum numbers of the wheat curl mite, *Aceria tulipae* (K.) (Eriophyidae) on the winter wheat plant during spring growth. Field & Lab. **22** 1954 : 65-67 figs. 1-3.

397.—Kanungo, M. S. The ecology and behaviour of the scorpion *Palamnaeus bengalensis* C. Koch. J. Bombay nat. Hist. Soc. **52** 1954 : 536-539 figs. 1-2.

398.—Karaman, S. L. Über unsere unterirdische Fauna. Acta Mus. maced. Sci. nat. **1** 9 1954 : 195-216 figs. [In Russian with German summary.]

399.—Kardos, E. H. Biological and systematic studies on the subgenus *Neotrombicula* (genus *Trombicula*) in the Central United States (Acarina, Trombiculidae). Kans. Univ. Sci. Bull. **36** 1954 : 69-123 figs. 1-23.

400.—Kaston, B. J. Is the black widow spider invading New England. Science **119** 1954 : 192-193.

401.—Kaul, S. Relapsing fever—tick-borne. Account of an outbreak in J. & K. Force, India. Indian Med. Gaz. **84** 10 1949 : 433-440 pl.

Kawecki, Z. see Lachmajer, J. **426**.

402.—Keifer, H. H. Eriophyid studies XIX. Bull. Dept. Agric. Calif. 41 1952 : 65-74 pls. 211-218.

403.—Keifer, H. H. Eriophyid studies XX. Bull. Dept. Agric. Calif. 41 1952 : 147-150 pls. 219-220.

404.—Keifer, H. H. Eriophyid studies XXI. Bull. Dept. Agric. Calif. 42 1953 : 65-79 pls. 221-232.

405.—Keifer, H. H. Eriophyid studies XXII. Bull. Dept. Agric. Calif. 43 1954 : 121-131 pls. 233-240.

406.—Kepka, O. Über Vorkommen von Trombidiose in Steiermark und Kärnten. Anz. Akad. Wiss. Wien 90 1953 : 89-94.

407.—[Kharitonov, D. E.] [Systematic review of animals of the forest zone. VI. Spiders—Araneina.] Zhivotn. Mir S.S.S.R. 4 1953 : 556-565 figs. 279-287. [In Russian.]

Kheisin, E. M. see Lutta, A. S. 475.

408.—Kilfoyle, C. F. Catalog of type specimens of fossils in the New York State Museum. Supplement 4. Bull. N.Y. St. Mus. No. 348 1954 : 1-719.

Kimura, H. see Miyazawa, M. 512.

409.—King, D. R. Control of *Acrobasis caryae* and *Tetranychus bicoriae* on Pecans. J. econ. Ent. 47 1954 : 713-715.

410.—Klein, B. M. Vom Spinnergerät der Spinnen. Mikrokosmos 43 1954 : 241-246 figs. 1-10.

411.—Klostermeyer, E. C. Mite control of legume seed crops. J. econ. Ent. 47 1954 : 30-34.

412.—Klumpff, W. Embryologie und histologie der Bienenmilbe *Acarapis woodi* Rennie 1921. Z. Parasit. 16 5-6 1954 : 407-442 figs. 1-19.

413.—Knülle, W. *Lycosa purbeckensis* F.O.P. Cambridge (Lycosidae: Araneae), eine deutsche Küstenart.—Ein Beitrag zur Taxonomie der *Lycosa monticola* Gruppe. Kieler Meeresforsch. 10 1954 : 68-76 pl. 22.

414.—Knülle, W. Methoden und Ziele biologisch-indikatorischer Bodenklassifikation im Hinblick auf ihre Bedeutung für Bodenschädlinge. Mitt. Biol. Zentral. Berlin-Dahlem 75 1953 : 160-161.

415.—Knülle, W. Gynandromorphie bei *Erigone vagans spinosa* Cambr.

(Micyrphantidae: Araneae.) Zool. Anz. 152 1954 : 219-227 figs. 1-11.

416.—Knülle, W. Die Arten der Gattung *Tectocephus* Berlese. (Acarina: Oribatei.) Zool. Anz. 152 1954 : 280-305 figs. 1-24.

417.—Knülle, W. Neue Arten der Oribatiden-Gattung *Pelops* (Acari). Zool. Anz. 153 1954 : 215-221 figs. 1-5.

418.—Knülle, W. Zur Taxonomie und Ökologie der norddeutschen Arten der Spinnen-Gattung *Erigone* Aud. Zool. Jb. Syst. 83 1954 : 63-110 figs. 1-28.

Knutson, H. see Kantack, E. J. 396.

Kolpakova, S. A. see Bregetova, N. G. 113.

Korshunova, O. S. see Piontkovskaya, S. P. 580.

419.—Kraus, O. Myriapoden aus Peru, I. Senckenbergiana 34 1954 : 311-323 pls. 1-3.

420.—Kraus, O. Myriapoden aus Peru, II. Senckenbergiana, Biol. 35 1954 : 17-55 1-92.

421.—Kraus, O. Myriapoden aus El Salvador. Senckenbergiana, Biol. 35 1954 : 293-349 pls. 27-32.

422.—Krishnan, G. The epicuticle of an arachnid, *Palamneus swammerdami*. Quart. J. micr. Sci. 95 1954 : 371-381 figs. 1-2.

423.—Kurir, A. Der Pseudoskorpion *Dactylocheliifer latreillei* Leach als Säftesauger der Larven von *Helicomyia saliciperda* Duf. Anz. Schädlingssk 27 1954 : 137-138 figs. 1-2.

424.—Laarman, J. J. Copra itch in the Netherlands. Acta Leidensis 23 1953 : 100-106 figs. 1-6.

Labunetz, N. F. see Ter-Vartanov, V. N. 724.

425.—[Lachmajerowa, J.] [Natural habitats of the tick *Ixodes ricinus* in the Province of Gdansk. Bull. Inst. mar. trop. Med. Gdansk 4 4 1952 : 409-422. [In Polish with English summary.]

426.—[Lachmajer, J. & Kawecki, Z.] [Strains of neurotropic viruses isolated from ticks, *Ixodes ricinus*, on the coast.] Bull. Inst. mar. trop. Med. Gdansk 5 (1953) 1954 : 50-53.

Lalicker, C. G. see Moore, R. C. 518.

- 427.—Lamb, K. P. The tropical rat mite, *Bdellonyssus bacoti* (Hirst, 1913), attacking man in New Zealand. N.Z. med. J. 51 285 1952 : 320-322 fig. 1.
- 428.—Lamontellerie, M. *Ixodes sigalasi* n. sp., ixodoïde nouveau des oiseaux. Ann. Parasit. hum. comp. 29 1954 : 561-567 figs. 1-10 photo.
- 429.—Lanchester, H. P. Summer control of pear leaf blister mite. J. econ. Ent. 47 1954 : 1026-1021.
- 430.—Landis, B. J. & Gibson, K. E. Abundance of mites on potatoes treated with DDT, sulfur, parathion, or malathion for aphid control. J. econ. Ent. 46 1953 : 1025-1029.
- 431.—Lane, J. E. A redescription of the American lizard mite *Geckobiella texana* (Banks), 1904, with notes on systematics of the species (Acarina: Pterygosomidae). J. Parasit. 40 1954 : 93-99 pl. 1 fig. 1.
- 432.—Lang, J. Two new species of Diplopoda of Czechoslovakia. Mem. Soc. zool. tchéosl. 15 1951 : 554-556 figs. 1-3. [In Czech with English summary.]
- 433.—[Lange, A. B.] [Morphology of the mite *Zachvatkinella belbiformes*, gen. n. and sp. n.—new representative of the group Palaeacariformes (Acariformes)]. Zool. Zh. 33 1954 : 1042-1052 figs. 1-14. [In Russian.]
- 434.—Láska, F. Einige neue Wassermilben aus dem Flussgebiete Orava in der Slowakei. Acta Acad. sci. nat. Morav. 25 9 1953 : 281-296 figs. 1-5.
- 435.—Láska, F. Neue und einige wenig bekannte Wassermilben aus den fließenden Gewässern der Tschechoslowakei. Mém. Soc. zool. tchéosl. 17 1953 : 286-298 figs. 1-7. [German summary.]
- 436.—Láska, F. Ueber Wassermilben aus dem Vorgebirge des Gesenkes. Sborn. pŕir. Společ. Mor. Ostravé 13 1952 : 511-517 figs. 1-4.
- 437.—Láska, F. Zwei neue *Hygrobat*-Arten (Hydrachnellae, Acari) aus der Slowakei. Zool. Anz. 152 1954 : 36-38 figs. 1-2.
- 438.—Láska, F. Über einige neue *Lebertia*-Arten (Hydrachnellae, Acari) aus der Tschechoslowakei. Zool. Anz. 153 1954 : 159-166 figs. 1-4.
- 439.—Lautner, F. Erlebnisse mit einer Bananenspinne. Aquar. Terrar. Z. 7 1954 : 189 1 fig.
- Lavoipierre, M. M. J. see Riek, R. F. 613.
- 440.—Lawrence, R. F. A new fur-mite from South Africa (Trombidiformes: family Myobiidae). Ann. Mus. Congo belge N.S. 4to Zool. 1 1954 : 214-216 figs. 1-2.
- 441.—Lawrence, R. F. The known African species of *Cheyletidae* and *Pseudocheyletidae* (Acarina, Prostigmata). Ann. Natal Mus. 13 1954 : 65-77 figs. 1-6.
- 442.—Lawrence, R. F. The rôle of the forests in the evolution of terrestrial life. J. ent. Soc. S. Afr. 17 1954 : 3-8.
- 443.—Lawrence, R. F. Two new fur-mites from rodents. J. ent. Soc. S. Afr. 17 1954 : 38-46 figs. 1-5.
- 444.—Lawrence, R. F. Fluorescence in Arthropoda. J. ent. Soc. S. Afr. 17 1954 : 167-170.
- 445.—Lawrence, R. F. Some Solifugae in the collection of the British Museum (Natural History). Proc. zool. Soc. Lond. 124 1954 : 111-124 figs. 1-7.
- 446.—Lawrence, R. F. The biology of the cryptic fauna of forests, with special reference to the indigenous forests of South Africa. Cape Town (A. A. Balkema) 1953 : 1-408 figs. 1-160.
- 447.—Lazowska, M. Associations of water mites of the upper littoral of some Mazurian lakes. Ekol. polska 1 1 1953 : 67-82. [English summary.]
- 448.—Legendre, R. Recherches sur les glandes prosomatiques des Araignées du genre: *Tegenaria*. Ann. Univ. saraviensis 2 4 1953 : 305-333 pls. 1-7 figs. 1-9.
- 449.—Legendre, R. Sur la présence du cellules neurosécrétrices dans le système nerveux central des Aranéides. C.R. Acad. Sci. Paris 238 1954 : 1267-1268.
- 450.—Legg, J. A further note on the control of cattle tick (*Boophilus microplus*) by the use of synthetic insecticides. Austr. Vet. J. 29 7 1953 : 200-201.
- 451.—Legg, J. & Shanahan, G. J. The appearance of an arsenic resistant cattle tick (*Boophilus microplus*) in a

small area of New South Wales. Its reaction to some of the newer insecticides. *Aust. vet. J.* **30** 4 1954 : 95-99.

Le Gros, A. E. *see* Owen, D. F. 549.

452.—León, L. A. & Castillo de León B. Transmisiones naturales y experimentales del *Trypanosoma cruzi* en el Ecuador. *Rev. Ecuat. Ent. Parasit.* **1** 4 1953 : 45-62 2 pls.

453.—Leone, C. A. Serological studies of some arachnids, other arthropods, and mollusks. *Physiol. Zool.* **27** 1954 : 317-325.

454.—LeRoux, E. J. Effects of various levels of nitrogen, phosphorus, and potassium in nutrient solution, on the fecundity of the two-spotted spider mite, *Tetranychus bimaculatus* Harvey (Acarina: Tetranychidae) reared on cucumber. *Canad. J. Agric. Sci.* **34** 2 1954 : 145-151.

455.—Levi, H. W. Spiders of the genus *Euryopis* from North and Central America (Araneae, Theridiidae). *Amer. Mus. Novit.* No. 1666 1954 : 1-48 figs. 1-138.

456.—Levi, H. W. Spiders of the new genus *Theridiotis* (Araneae: Theridiidae). *Trans. Amer. micr. Soc.* **73** 1954 : 177-189 pls. 1-3.

457.—Levi, H. W. The spider genus *Theridula* in North and Central America and the West Indies (Araneae: Theridiidae). *Trans. Amer. micr. Soc.* **73** 1954 : 331-343 figs. 1-25.

458.—Levi, H. W. & Field, H. M. The spiders of Wisconsin. *Amer. midl. Nat.* **51** 1954 : 440-467 figs. 1-113.

459.—Lewis, C. B. Further notes on the black widow and the brown widow. *Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 65 1954 : 79-80.

460.—Lewis, C. B. Another locality for the Black-widow spider. *Nat. Hist. Notes nat. Hist. Soc. Jamaica* No. 68 1954 : 148.

461.—Lewis, C. B. A two-tailed scorpion. *Nat. Hist. Notes Nat. Hist. Soc. Jamaica* No. 69 1954 : 165.

462.—Lienk, S. E. & Chapman, P. J. Evaluation of acaricides on orchard mites in 1952. *J. econ. Ent.* **46** 1953 : 1085-1086.

463.—Lipovsky, L. J. Studies of the food habits of postlarval stages of

chiggers (Acarina, Trombiculidae). *Kans. Univ. Sci. Bull.* **36** 1954 : 943-958.

464.—Lipovsky, L. J. & Loomis, R. B. A new chigger mite (genus *Euschön-gastia*) from the Central United States. *J. Parasit.* **40** 1954 : 407-410 pl. 1.

Lipovsky, L. J. *see* Crossley, D. A. 193.

Lipovsky, L. J. *see* Loomis, R. B. 469.

465.—Lissitzky, S., Garcia, I. & Roche, J. Sur les dérivés guanidiques du muscle de scorpion, *Androctonus australis* (L.). *C.R. Soc. Biol., Paris* **148** 1954 : 436-439 figs. 1-2.

Little, C. D. *see* Edgar, S. A. 237.

Locket, G. H. *see* Duffey, E. 231.

Lohrman, R. *see* Jones, R. W. 390.

466.—Loksa, I. Die *Polydesmus*-Arten des Faunengebietes des Karpatenbeckens. *Ann. hist.-nat. Mus. hung.* **N.S. 5** 1954 : 215-224 figs. 1-34.

467.—Lombardini, G. Acari nuovi. *Redia* **38** 1953 : 181-194 figs. 1-10.

468.—Loomis, R. B. A new subgenus and six new species of chigger mites (genus *Trombicula*) from the Central United States. *Kans. Univ. Sci. Bull.* **36** 1954 : 919-941 pls. 1-4.

469.—Loomis, R. B. & Lipovsky, L. J. Two new chigger mites (genus *Trombicula*) from the central United States. *J. Kansas ent. Soc.* **27** 1954 : 47-53 figs. 1-11.

Loomis, R. B. *see* Lipovsky, L. J. 464.

470.—Lowrie, D. C. The orb-weaving spiders of the Chicago area. *Amer. midl. Nat.* **49** 1953 : 846-861.

471.—Łuczak, J. Associations of forest spiders. *Ekol. polska* **1** 4 1953 : 57-94 figs. 1-22. [English summary.]

Ludvik, J. *see* Daniel, M. 196, 197.

472.—Lundblad, O. Die Hydracarinafauna von Colombia. *Ark. Zool.* **N.S. 5** 1954 : 435-586 pls. 1-19 figs. 1-88.

473.—Lundblad, O. En revision av C. J. Neumans hydracarinsamling. *Ent. Tidskr.* **75** 1954 : 44-60 figs. A-C.

474.—Lundblad, O. Neue südeuropäische Wassermilben. *Zool. Anz.* **153** 1954 : 154-159.

475.—[Lutta, A. S. & Kheisin, E. M.] [Some facts in regard to the rôle of

various species of Ixodidae in distribution of Babesiosis in the North.] Zool. Zh. **33** 1954 : 65-68. [In Russian.]

476.—[Lutta, A. S. & Shulman, R. E.] [On the spreading of *Ixodes persulcatus* P. Schulze on the western frontier of the Karelo-Finnish Republic. Zool. Zh. **33** 1954 : 1231-1235. [In Russian.]

477.—MacDonald, S. D. A brown widow spider bite. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 66 1954 : 106.

478.—Macfadyen, A. The invertebrate fauna of Jan Mayen Island (East Greenland). J. Anim. Ecol. **23** 1954 : 261-297 figs. 1-2.

479.—McGregor, E. A. Two new mites in the genus *Typhlodromus* (Acarina, Phytoseiidae). Bull. S. Calif. Acad. Sci. **53** 1954 : 89-92 pls. 21-22.

McIntyre, J. C. see Schiller, E. L. 656.

480.—Mackie, T. T., Hunter, G. W. & Worth, C. B. A manual of tropical medicine (W. B. Saunders Co.) Philadelphia & London 1954 : i-xxii + 907 figs. 1-304 (7 col.).

481.—Madden, A. H., Tozloski, H. A. & Sweetman, H. L. Control of *Myobia musculinus* (Schrank) and *Myocoptes musculinus* (Koch) on laboratory mice. J. econ. Ent. **47** 1954 : 442-444.

Madel, W. see Götz, B. 293.

482.—Mahon, J. A new species of *Raillietiella*, a pentastomid from the bearded lizard, *Amphibolurus barbatus* (Cuv.). Proc. zool. Soc. Lond. **124** 1954 : 509-516 figs. 1-6.

Mahon, R. see Mornet, P. 522.

483.—Malhomme, J. Aperçu sur la distribution des scorpions de la région de Marrakech. Bull. Soc. Sci. nat. Maroc **34** 1954 : 25-30 map.

484.—Manfredi, P. Contributo alla conoscenza dei Myriapodi cavernicoli Italiani. Atti Soc. ital. Sci. nat. **92** 1953 : 76-108 figs. 1-19.

485.—Manfredi, P. Miriapodi Italiani. VIII. Contributo. Atti Soc. ital. Sci. nat. **92** 1953 : 117-122 figs. 1-6.

486.—Manfredi, P. Un myriapodo esotico, nuovo indesiderato ospite della nostre campagne. Natura, Milano **45** 1954 : 140-141.

Manier, J.-F. see Tuzet, O. 738, 739, 740.

487.—Manton, S. M. The evolution of arthropodan mechanisms. Part 4. The structure, habits and evolution of the Diplopoda. J. Linn. Soc. Lond. (Zool.) **42** 1954 : 299-368 pls. 52-55 figs. 1-8.

488.—Maretic, Z. Arachnidism treated with cortisone. Report of a case. J. Amer. med. Ass. **152** 7 1953 : 609.

489.—Margolis, L. List of the parasites recorded from sea mammals caught off the west coast of North America. J. Fish. Res. Bd. Can. **11** 1954 : 267-283.

490.—Martino, E. di. L'*Aceria sheldoni* Ewing nuovo parassita degli Agrumi in Sicilia e Campania. Boll. Lab. Ent. Agr. Portici **12** 1953 : 1-15 figs. 1-5.

491.—Mason, B. & Gilbert, O. Presence of a peritrophic membrane in Diplopods. Nature, Lond. **174** 1954 : 1022.

492.—Massee, A. M. The pests of fruits and hops. London (Crosby Lockwood & Son) 1954 3rd Ed. pp. xvi + 325 illustr.

493.—Mathew, A. P. Observations on the habits of two spider mimics of the red ant, *Oecophylla smaragdina* (Fabr.). J. Bombay nat. Hist. Soc. **52** 1954 : 249-263 figs. 1-5.

494.—Mathys, G. Contribution éthologique à la résolution du complexe *Bryobia praetiosa* Koch (Acar., Tetranych.). Mitt. schweiz. ent. Ges. **27** 1954 : 137-146 figs. 1-6.

May, R.-M. see Collin, J. 167.

495.—Mazzotti, L. Presencia en Mexico, de espiroquetas de la fiebre recurrente en *Ornithodoros talaje*. Rev. Inst. Salubr. Enferm. trop. **13** 4 1953 : 285-287.

496.—Meléndez, B. Un myriapode du Carbonifère de l'Espagne. C.R. 3e Congr. Stratigr. Géol. Carbonifère **2** 1952 : 457-458 pl. 20b figs. 1 & 2.

497.—Melis, R. & Beccari, F. Osservazioni sull'effetto chemioterapico degli insetticidi organo-fosforici sulla scabbia del coniglio da *Sarcoptes scabiei* var. *cuniculi* L. Redia **38** 1953 : 145-161 169-180.

- 498.—Mellanby, H. Animal life in fresh water, 5th Ed. 1953 : x + 296 figs. 211. [Arach. 216-228.]
- 499.—Menon, P. B., Sen Gupta, C. M. & Basu, B. C. Feeding of organic insecticides to chicken and its effect on the control of *Argas persicus* (Oken). Indian vet. J. 30 4 1954 : 283-286.
- 500.—Messikommer, E. Zur Kenntnis der niederen Sumpf- und Wasserfauna der Gegend des Pfäffikersees (Kt. Zürich). Rev. suisse Zool. 61 1954 : 635-656.
- Miesse, M. L. see Gould, D. J. 294.
- 501.—Mihelčič, F. Beitrag zur Geographie und Ökologie des Genus *Passalozetes* Gdrj. Zool. Anz. 153 1954 : 167-170 fig. 1.
- 502.—Mihelčič, F. Zur Ökologie der Tardigraden. Zool. Anz. 153 1954 : 250-257.
- 503.—Mihelčič, F. Beitrag zur Kenntnis der Oribatiden Mitteleuropas. (Neue *Liaccarus*-Arten.) Zool. Anz. 153 1954 : 298-308 figs. 1-10.
- Mikhaleva, V. A. see Olsufyev, N. G. 547.
- 504.—Miller, L. W. Laboratory observations on the biology of the European red mite, *Paratetranychus pilosus* (C. & F.) in Tasmania: Biology of the red spider mite. Corrigendum. Tasm. J. Agric. 24 1953 : 20-30 figs. 1-2: no. 2 : 124.
- 505.—Millidge, A. F. On a new species and genus of spider. Ann. Mag. nat. Hist. (12) 7 1954 : 253-256 fig. 1.
- Millidge, A. F. see Duffey, E. 231, 232.
- 506.—Milne, L. J. & Milne, M. J. The worm that didn't turn—into anything. [Peripatus.] Nat. Hist., N.Y. 63 1954 : 182-187 7 figs.
- 507.—Mimioglu, M. Die Schildzecken (Ixodiden) der Haustiere in der Türkei. Vet. Fakült. Dergisinin Cilt 1 2 1954 : 20-34 figs. 1-48.
- Miré, P. de see Baluzuc, J. 60.
- 508.—Miskjian, H. G. Demodicidosis (*Demodex* infestation of the scalp). Arch. Dermat. & Syph. 63 1951 : 282-283.
- 509.—Mitchell, R. D. Check list of North American water-mites. Fieldiana, zool. 35 1954 : 29-70.
- 510.—Mitchell, R. D. A description of the water-mite, *Hydrovolzia gerhardi* new species, with observations on the life history and ecology. Nat. Hist. Misc. No. 134 1954 : 1-9 figs. 1-3.
- 511.—Mitchell, R. D. Water-mites of the genus *Atrurus* (family Axonopsidae). Trans. Amer. micr. Soc. 73 1954 : 350-367 figs. 1-26.
- 512.—Miyazawa, M., Kimura, H. & Shioya, T. Studies of Tsutsugamushi (mite) in Miura Peninsula (Report No. 1-2). Jap. Safety Forces med. J. 1 2 1954 : 28-31 figs. 1-2; 1 8 1954 : 18-22 fig.
- 513.—Miyosi, Y. Beiträge zur Kenntnis japanischer Myriopoden 10. Aufsatz: Über zwei neue Arten von Diplopoda. Zool. Mag. Tokyo 63 1954 : 288-291 figs. 1-2. [In Japanese with German summary.]
- 514.—Mohammed, A. H., Rohayem, H. & Zaky, O. The action of scorpion toxin on blood sodium and potassium. J. trop. Med. Hyg. 57 4 1954 : 85-87.
- 515.—Mohammed, A. H., Rohayem, H. & Zaky, O. Influence of Egyptian scorpion and cobra venoms on mammalian erythrocytes *in vitro*. Nature, London 173 1954 : 170.
- Mohr, C. O. see Calhoun, L. 134.
- 516.—Monastero, S. Secondo decennio di osservazioni entomologiche sui principali insetti nuovi della Sicilia (1940-1950). Atti Accad. Palermo (4) 12 1953 : 5-44.
- 517.—Monteith, J. L. Refraction and the spider. Weather 9 1954 : 140-141 fig. 1.
- Moon, A. P. see Hunter, G. W. III 366.
- Moon, A. P. see Therrien, A. A. 727.
- 518.—Moore, R. C., Lalicker, C. G. & Fischer, A. G. Invertebrate fossils New York [McGraw-Hill] 1952 : xiii + 766 pp. illustr. [Chelicerates, Myriapods and Insects: 552-573.]
- 519.—Mori, H. Ecological studies of apple tree mites. II. Host selection in the adult of *Metatetranychus ulmi* (Koch). Jap. J. appl. Zool. 19 1954 : 92-95 figs. 1-2. [In Japanese.]
- 520.—Morishita, F. S. Biology and control of *Brevipalpus inornatus* (Banks).

J. econ. Ent. 47 1954 : 449-456 figs. 1-4.

521.—Morlan, H. B. & Utterback, B. C. Ectoparasites of domestic rats in relation to murine typhus. Publ. Hlth. Monogr. No. 5 1952 : 21-30.

Morlan, H. B. *see* Strandtmann, R. W. 703.

522.—Mornet, P. & Mahou, R. La demodécie chez les bovins de l'Ouest Africain. Bull. Acad. Vét. France 22 1949 : 87-92.

523.—Morton, J. E. The crevice fauna of the upper intertidal zone at Wembury. J. Mar. biol. Ass. U.K. 33 1954 : 187-224 7 figs.

524.—Muenchberg, P. Kurze Mitteilung über die an Steinfiegen (Plecoptera) schmarotzenden Wassermilben-Larven. Arch. Hydrobiol. 49 1954 : 414-420 fig.

525.—Münchberg, P. Zur Kenntnis der an Culiciden (Diptera) schmarotzenden *Arrenurus*-Larven (Hydracarina) sowie über die Bedeutung dieser Parasiten für Wirt und Mensch. Z. Parasit. 16 1954 : 298-312 figs. 1-9.

526.—Mulaik, S. & Allred, D. M. New species and distribution records of the genus *Caeculus* in North America. Proc. ent. Soc. Wash. 56 1954 : 27-40 pls. 1-3.

527.—Murgatroyd, J. H. *Megabunus diadema* F. (Opiliones, Phalangidae) in Wales. Ent. mon. Mag. 90 1954 : 18.

528.—Murgatroyd, J. H. Additional spider records. Ent. mon. Mag. 90 1954 : 21.

529.—Murgatroyd, J. H. Anomalous specimens of *Erigone longipalpis* Sund. (Araneae, Linyphiidae). Ent. mon. Mag. 90 1954 : 231.

Murnaghan, M. F. *see* O'Rourke, F. J. 548.

530.—Murphy, P. W. Soil faunal investigations. Rep. Forest Res. London (1953) 1954 : 110-116.

Nadchatram, M. *see* Audy, J. R. 45.

Nakagawa, H. *see* Asanuma, K. 37.

Nardy, R. V. *see* Collins, D. L. 168.

531.—Nath, V. & Dhawan, R. M. An examination of the yolk-nucleus of the spider *Plexippus paykulli* under the

phase contrast microscope. Res. Bull. Panjab Univ. No. 59-60 1954 : 153-157 pls. 1-2 figs. 1-3.

532.—Neitz, W. O. *Hyalomma transiens* Schulze: A vector of sweating sickness. J. S. Afr. vet. med. Ass. 25 1954 : 19-20.

Nelzina, E. N. *see* Bregetova, N. G. 114.

533.—Nemenz, H. Ergebnisse der Österreichischen Iran-Expedition 1949/50. Ixodidae. Anz. Akad. Wiss. Wien 90 1953 : 126.

534.—Nemenz, H. Über den Wasserhaushalt einiger Spinnen, mit besonderer Berücksichtigung der Transpiration. Öst. zool. Z. 5 1954 : 123-158 figs. 1-7.

535.—Nesbitt, H. H. J. A new mite, *Zwickia gibsoni* n. sp., Fam. Anoetidae, from the pitchers of *Sarracenia purpurea* L. Canad. Ent. 86 1954 : 193-197 figs. 1-3.

536.—Nesbitt, H. H. J. Some random notes on the mite fauna of Limburg with description of two new species. Natuurh. Maandbl. 43 3 1954 : 19-24 pls. 1-2.

537.—[Neuimin, I. V.] [Changes of temperature in the body of the tick *Ornithodoros papillipes* in process of sucking blood.] Zool. Zh. 33 1954 : 356-360. [In Russian.]

538.—Newcomer, E. J. Identity of *Tetranychus pacificus* and *medanieli*. J. econ. Ent. 47 1954 : 460-462.

539.—Newell, G. E. The marine fauna of Whitstable. Ann. Mag. nat. Hist. (12) 7 1954 : 322-350.

Newton, H. D. *see* Traub, R. 734.

540.—Nicholas, L. *Demodex folliculorum*, its incidence in routine histologic study of the skin. Arch. Dermat. & Syph. 47 1943 : 793-796 fig.

541.—[Nikol'skaya, M. N.] [A new species of parasite of Ixodid ticks, *Ixodiphagus hirtus* Nik., sp. n. (Hymenoptera, Chalcidoidea).] Parasit. Sborn. 12 1950 : 272-274 figs. 1-14. [In Russian.]

542.—Nishio, Y. Über die vier spinnmilben an apfelbäumen. Oyo-Kontyu 10 1954 : 29-35 figs. [English summary.] [Not seen.]

543.—Noll, W. & Stammer, H. J. Die Grundwasserfauna des Untermain-

gebietes von Hanau bis Würzburg mit Euischluss des Spessarts. Mitt. naturw. Ver. Aschaffenh. N.F. No. 6 1953 : 1-77 figs. 1-11.

Obata, Y. *see* Fukuzumi, S. 274.

544.—O'Dell, H. Structure and development of the gall of a variety of *Eriophyes* Nal. on *Prunus scrotina* Ehrh. Abstr. Diss. Univ. Virginia 1952 1953 : 57-59.

Ogata, K. *see* Sasa, M. 647.

545.—Oldham, J. N. & Beresford-Jones, W. P. Observations on the occurrence of *Cnemidocoptes pilae* Lavoipierre and Griffiths, 1951 in budgerigars and a parakeet. Brit. Vet. J. 110 1 1954 : 29-30.

546.—Olds, R. J. *Pneumonyssus caninum*, Chandler and Ruhe, 1940, in North Queensland. Aust. vet. J. 29 1953 : 300-301 fig. 1.

547.—[Olsufyev, N. G., Petrov, V. G., Yamolova, N. S., Mikhaleva, V. A., Samsonova, A. P. & Skhlyustova, A. I.] [Rôle of *Dermacentor marginatus* as supporting factor of tularemia in natural conditions.] Zool. Zh. 33 1954 : 290-295. [In Russian.]

O'Neill, W. J. *see* Hantsbarger, W. M. 318.

548.—O'Rourke, F. J. & Murnaghan, M. F. Tick paralysis in the dog. Nature, London 173 1954 : 131-132.

549.—Owen, D. F. & LeGros, A. E. Spiders caught by swifts. Entom. Gaz. 5 1954 : 117-120.

550.—Ožegovic, L. Trombidiidosis in horses in Yugoslavia. First reports. Veterinaria, Sarajevo 3 3 1954 : 582-584 fig. 1.

551.—Ozsán, K. & Akyay, N. [Isolation of a *Borellia* from *Ornithodoros* in Turkey.] Turk Ijiyen ve Tecrubi Biyoloji Dergisi 13 3 1953 : 271-272.

Padilla, G. M. *see* Hunter, G. W. III 366.

552.—Palm, N.-B. The elimination of injected vital dyes from the blood in Myriapods. Ark. Zool. 6 1954 : 219-246 figs. 1-36.

553.—Palmén, E. Survey of the Chilopoda of Newfoundland. Arch. Soc. zool. bot. fenn. Vanamo 8 (1953) 1954 : 131-149 figs. 1-17.

554.—Palmén, E. & Rantala, M. On the life-history and ecology of *Pachymerium ferrugineum* (C. L. Koch) (Chilopoda, Geophilidae). Ann. zool. Soc. zool.-bot. Vanamo 16 3 1954 : 1-44 figs. 1-13.

555.—Palmer, A. R. & Bassett, A. M. Non marine arthropods from California. Science 120 1954 : 228-229 1 fig.

556.—Panouse, J. B. Les Hamada Sud-Morocaines. Résultat de la Mission d'Étude 1951 de l'Institut Scientifique Chérifien et du Centre des Recherches Sahariennes. I. Zoologie (à l'exclusion de l'Entomologie) Mammifères, Oiseaux, Reptiles, Batraciens, Myriapodes, Crustacés, Solifuges. Trav. Inst. sci. Chérifien Sér. Gén. No. 2 1954 : 17-185.

557.—Papi, F. Su alcuni Tardigradi raccolti nell'Italia centrale. Mem. Soc. tosc. Sci. nat. 59B 1952 : 116-118.

558.—Pardi, M. C. & Rocha, U. F. Lesions in the skins of pigs caused by the bites of *Ornithodoros rostratus* Aragão, 1911 (Acari, Argasidae). Economic importance. Rev. Fac. Med. Vet. S. Paulo 5 1954 : 35-39 1 pl.

Pardi, M. C. *see* Rocha, U. F. 620.

Parke, W. N. *see* Penner, L. R. 568.

559.—Parry, D. A. On the drinking of soil capillary water by spiders. J. exp. Biol. 31 1954 : 218-227 figs. 1-4.

560.—P[aulian], R. Les Ixodoidea de Madagascar. Nat. malgache 6 1954 : 133. [Abstract.]

561.—P[aulian], R. Un nouvel Hydracarien de Madagascar. Nat. malgache 6 1954 : 135. [Abstract.]

562.—Pavan, M. & Vachon, M. Sur l'existence d'une substance fluorescente dans les téguments des Scorpions (Arachnides). C.R. Acad. Sci. Paris 239 1954 : 1700-1702.

563.—[Pavlovski, E. N.] [The reactions of the tick, *Ornithodoros papillipes* Bir. to certain physical factors of the environment.] Mag. Parasit., Moscow 12 1950 : 3-12 figs. 1-16. [In Russian.]

564.—[Pavlovski, E. N., Pervomaïski, G. S., Chagin, K. P.] [Degree of feeding of a single and simultaneously of two species of pasture ticks on rabbits (Ixodidae).] Zool. Zh. 33 1954 : 497-506 figs. 1-5. [In Russian.]

565.—[Pavlovski, E. N. & Skrinnik, A. N.] [Experimental analysis of various stages in the metamorphosis of *Ornithodoros papillipes* in the transmission of the spirochaetes of tick-borne relapsing fever.] Mag. Parasit., Moscow 14 1952 : 47-55. [In Russian.]

566.—Payzin, S. & Akyay, N. *Ornithodoros lahorensis* kenelerinde tabii olarak *Coziella burnetti*'nin bulunusu. [Natural occurrence of *Coziella burnetti* in *Ornithodoros lahorensis*.] Turk. Bull. Hyg. exp. Biol. 12 1952 : 8-19. [English summary.]

Pence, R. J. see Ebeling, W. 236.

567.—Penner, L. R., Francis, T., Jr. & Brown, C. Some observations on the ecology of a North American chigger *Trombicula (Eutrombicula) lipovskyana* Wolfenbarger, 1952 in a Tennessee community. J. Kansas ent. Soc. 27 1954 : 113-117.

568.—Penner, L. R. & Parke, W. N. *Notoedric mange* in the bobcat, *Lynx rufus*. J. Mammal. 35 1954 : 453.

569.—Perron, R. Untersuchungen über Bau, Entwicklung und Physiologie der Milbe *Histioglyphus laboratorum* Hughes. Acta zool., Stockh. 35 1954 : 71-176 56 figs.

Pervomaiski, G. S. see Pavlovski, E. N. 564.

570.—Peters, H. M. Worauf beruht die Ordnung im Spinnen-Netz? Umschau 54 12 1954 : 368-370 figs. 1-7.

571.—[Petrishcheva, P. A.] [Blood-sucking insects and ticks in Karakum and their medical importance in the deserts.] Zool. Zh. 33 1954 : 243-267 figs. 1-15. [In Russian.]

Petrov, V. G. see Olsufyev, N. G. 547.

572.—Petrunkevitch, A. The spider and the wasp. Sci. Amer. 187 2 1952 : 20-23, 10 figs.

573.—[Petunin, F. A.] [Mechanisation of treatments of cattle against ticks with the help of a DUK. Veterinariya, Moscow 30 6 1953 : 57-58. [In Russian.]

574.—Pflugfelder, O. Über eigenartige Abwehrreaktionen bei Milbenbefall. Mikrokosmos 43 1954 : 169-171 figs. 1-4.

575.—Philip, C. B. Ricketts and tick transmission of Rocky Mountain spotted fever. J. Parasit. 40 1954 : 99-100.

576.—Philip, C. B. A new locality record in Africa for the tick parasite, *Hunterellus hookeri* Howard. J. Parasit. 40 1954 : 234-235.

577.—Philip, C. B., Gill, G. D. & Geary, J. M. Notes on the rabbit tick, *Haemaphysalis leporis-palustris* (Packard), and tularemia in Central Alaska. J. Parasit. 40 1954 : 484-485.

Philip, C. B. see Bishopp, F. C. 91.

Philips, F. M. see Hunter, G. W. III 366.

Pickens, E. G. see Burgdorfer, W. 128.

578.—Pigón, A. & Weglarska, B. The respiration of Tardigrada: A study in animal anabiosis. Bull. Acad. polon. Sci. Cl. 2 1 2 1953 : 69-72.

579.—Pikelin, B. S. G. de & Schiapelli, R. della. Una nueva Theraphosidae del género *Homocomma* Ausserer, 1871 (Araneae). Physis 20 1954 : 420-423 3 figs.

580.—[Piontkovskaya, S. P., Korshunova, O. S. & Grokhovskaya, I. M.] [Three natural foci of infection.] Zool. Zh. 33 1954 : 323-329. [In Russian.]

Plate, H. P. see Viets, K. 767.

581.—Potemkina, V. A. Contribution to the biology of *Moniezia expansa* (Rudolphi, 1810), a tapeworm parasitic in sheep and goats. C.R. Acad. Sci. USSR 30 1941 : 474-476 fig.

Pounden, W. D. see Bell, D. S. 79.

582.—Pratt, H. D. & Good, N. E. Distribution of some common domestic rat ectoparasites in the United States. J. Parasit. 40 1954 : 113-129 figs. 1-12.

583.—Přibyl, A. On the genus *Adelophthalmus* Jordan and Meyer, 1854 (Eurypteridae) and its representatives in the Upper Carboniferous of Czechoslovakia. Bull. int. Acad. Prague 53 1953 : 63-79 pls. 1-2.

Primak, A. T. see Blednikh, A. G. 93.

584.—Pritchard, A. E. Biological and taxonomic aspects of mite control. Agric. Chem. May 1953 : 4 pp.

585.—Pritchard, A. E. California greenhouse pests and their control. Calif. Agr. Exp. Sta. Bull. 713 1949 : 71 pp.

Pritchard, A. E. see Baker, E. W. 56

586.—Qadri, M. A. H. An important parade of forest mite-pests, *Thea bisectonotata* Muls. Proc. 4th Pakistan sci. Conf. pt. 3 1952 : 72. [Abstract.]

587.—Racovitza, A. Le problème de la lutte contre les mites dans les dépôts de fermentation de tabac et ceux de tabac non manufacture. Bul. Tutinului, Bucaresti 40 1953 : 84-96. [French résumé.]

588.—Radford, C. D. Observations on the fur mites (Acarina, Myobiidae). Ann. Mus. Congo belge N.S. 4to Zool. 1 1954 : 238-248 figs. 1-7.

589.—Radford, C. D. Some mites of Yemen. Fieldiana, Zool. 34 1954 : 295-313 figs. 47-57.

590.—Radford, C. D. A new larval mite from Eritrea (Acarina: Trombiculidae). Fieldiana, Zool. 34 1954 : 315-318 figs. 1-4.

591.—Radford, C. D. The larval genera and species of 'harvest mites' (Acarina: Trombiculidae). Parasitology 44 1954 : 247-276 figs. 1-108.

592.—Radford, C. D. Three new species of fur mites (Acarina: Listrophoridae). Riv. Parassit. 15 1954 : 593-599 figs. 1-3.

Radke, M. G. see Hunter, G. W. III 366.

Rainwater, C. F. see Iglinsky, W. Jr. 369.

593.—Ramannujachari, G. & Alwar, V. S. Observations on theileriasis among sheep in Madras. Ann. Madras Vet. Coll. 12 1954 : 23-25 figs.

594.—Ramazzotti, G. Nuove tabelle di determinazione dei generi *Pseudechiniscus* ed *Echiniscus* (Tardigrada). Mem. Ist. ital. Idrobiol. de Marchi 8 1954 : 177-204.

Rantala, M. see Palmén, E. 554.

595.—Rao, N. S. K. & Choquette, L. P. E. On the finding of an intermediary host for *Moniezia expansa* (Rud. 1810) in eastern Quebec. Canad. J. comp. Med. 15 1951 : 12-14.

596.—Rasmont, R. Arachnides du Midi de la France. Nat. belges 35 4-5 1954 : 104-108 figs. 1-2.

597.—Rayment, T. Incidence of Acarid mites on the biology of bees. Aust. Zool. 12 1954 : 26-38 pl. 1 fig. 1.

598.—Rayski, C. Sheep tapeworms and their intermediate hosts. Scott. Farmer 55 2823 1947 : 284.

599.—[Razumova, I. N.] [New species of Gamasids belonging to the family Liponyssidae.] Mag. Parasit. Leningr. 15 1953 : 339-344 figs. 1-4. [In Russian.]

600.—Rehn, J. A. G. The John Eaton Leconte collection of paintings of insects, arachnids, and myriapods. Proc. Amer. phil. Soc. 98 1954 : 441-448 figs. 1-8.

601.—Rempel, J. G. Siamese twin embryos of the black widow spider, *Latrodectus mactans* (Fabr.). Canad. J. Zool. 32 1954 : 240-243 figs. 1-12.

602.—Remy, P. A. Pauropodes d'Afrique tropicale. Ann. Mus. Congo belge N.S. 4to Zool. 1 1954 : 249-256 figs. 1-5.

603.—Remy, A. Description d'un nouveau type de Pauropode: *Hansenauropus gratus* n.g., n. sp., de Nouvelle-Zélande. Bull. Mus. Hist. nat. Paris (2) 26 1954 : 104-108 figs. 1-2.

604.—Remy, P. A. Description des grottes Yougoslaves (Herzégovine, Dalmatie, Crna Gora et ancien Sandjak de Novi Pazar). Bull. Mus. Hist. nat. Serbe (B) Nos. 5-6 1953 : 175-233 figs. 1-9.

605.—Remy, P. A. Deux nouveaux Pauropodes de la région pyrénéenne. Bull. Soc. ent. Fr. 59 1954 : 141-144 figs. 1-2.

606.—Remy, P. A. Quelques Pauropodes du Michigan. Rev. franç. Entom. 21 1954 : 125-131 figs. 1-2.

607.—Remy, P. A. Pauropodes de la zone du canal de Panama. Rev. franç. Entom. 21 1954 : 291-298 figs. 1-2.

608.—Remy, P. A. Pauropodes de la zone subterrestre du littoral Méditerranéen. Vie et Milieu 4 1954 : 122-125 1 fig.

Reznik, P. A. see Ter-Vartanov, V. N. 724.

609.—Richards, A. G. The integument of Arthropods. The chemical components and their properties, the anatomy and development, and the permeability. Minneapolis (Univ. Minnesota Press) 1951 pp. xvi + 411 65 figs.

610.—Ricker, D. W. & Fleschner, C. A. An Eriophyid mite new to Avocados in California. *J. econ. Ent.* 47 1954 : 926.

Ricker, D. W. *see* Fleschner, C. A. 264.

611.—Riehl, L. A. & Jeppson, L. R. Narrow-cut petroleum fractions of naphthenic and paraffinic composition for control of citrus red mite and citrus bud mite. *J. econ. Ent.* 46 1953 : 1014-1020.

612.—Riek, R. F. Allergic reaction in the horse to infestation with larvae of *Boophilus microplus* (Canes). (Ixodides: Acarina.) *Aust. vet. J.* 30 1954 : 142-144 figs. 1a-1b.

613.—Riek, R. F. & Lavoipierre, M. M. J. Reactions of the skin of laboratory animals to the bites of argasid ticks. *Trans. R. Soc. trop. Med. Hyg.* 48 1 1954 : 8-9.

614.—Roberti, D. I simbionti degli acari fitofagi. I.—*Therodiplosis persicae* Kieffer. *Boll. Lab. Ent. Agr. Portici* 13 1954 : 285-302 figs. 1-9.

615.—Roberts, F. H. S. A note on the distribution of the paralysis tick, *Ixodes holocyclus* Neumann, in Victoria. *Aust. vet. J.* 30 1954 : 144.

616.—Roberts, F. H. S. Host specificity of livestock parasites in Australia. *Rep. Aust. Ass. Advanc. Sci.* 29 1953 : 247-257.

617.—Roberts, F. H. S. Insects affecting livestock with special reference to important species occurring in Australia. Sydney & London (Angus & Robertson) 1952 : vii + 267 figs. 1-138.

618.—Roberts, I. H. & Rogoff, W. M. Organic insecticides for the control of swine mange. *J. Amer. vet. med. Ass.* 123 1953 : 227-231.

619.—Roberts, N. L. "Will you step into my net?" : the remarkable "fishing spider" of Australia seen in flashlight photographs. *Ill. Lond. News* 225 1954 : 611, 4 photos.

Robinson, B. N. *see* Theiler, G. 725.

Roch, R. *see* Handschin, E. 317.

620.—Rocha, U. F. & Pardi, M. C. Mange in bovines of the state of São Paulo, caused by *D. bovis* (Stiles, 1892), (Acari, Demodicidae). *Rev. Fac. Med. Vet. S. Paulo* 5 1 1954 : 27-34 2 pls.

Rocha, U. F. *see* Pardi, M. C. 558.

621.—Rochaix, B. Symphytes de la région Pyrénéenne et de la Montagne-Noire. *Vie et Milieu* 5 1954 : 159-163.

622.—Roche, A. Sur les caractères histologiques des glandes annexes de l'appareil génital ♂ chez *Scolopendra cingulata* (Latreille). *Bull. Soc. zool. Fr.* 78 1954 : 339.

Roche, J. *see* Lissitzky, S. 465.

623.—Rodriguez, J. G. Radiophosphorus in metabolism studies in the two-spotted mite. *J. econ. Ent.* 47 1954 : 514-517.

624.—Roewer, C. Fr. *Mediterrane Opiliones Palpatores*. *Abh. naturw. Ver. Bremen* 33 2 1953 : 201-210 figs. 1-6.

625.—Roewer, C. Fr. *Einige neue Opiliones Laniatores und Solifugae*. *Abh. naturw. Ver. Bremen* 33 3 1954 : 377-384 figs. 1-2.

626.—Roewer, C. Fr. Über einige Solifugen und Pedipalpi der äthiopischen Region. *Ann. Mus. Congo belge N.S. 4to Zool.* 1 1954 : 262-268 figs. 1-11.

627.—Roewer, C. Fr. Katalog der Araneae von 1758 bis 1940, bzw. 1954 Bd. 2 Abt. a. (Lycosaeformia, Dionycha [excl. Salticiformia]) Bruxelles 1954 : 1-923; Bd. 2, Abt. b (Salticiformia, Cribellata) (Synonyme-Verzeichnis, Gesamtindex) Bruxelles 1954 : 924-1751.

628.—Roewer, C. F. Spinnentiere aus El Salvador, I. (Arachnoidea: Pedipalpi, Solifuga, Opiliones-Laniatores). *Senckenb. Biol.* 35 1954 : 57-73 figs. 1-10.

629.—Roewer, C. Fr. Indoaustralische Gaggrellinae (Opiliones, Arachnidae). (Weitere Weberknechte XVIII). *Senckenbergiana Biol.* 35 1954 : 181-236 figs. 1-50.

630.—Roewer, C. F. Indoaustralische Gaggrellinae (Opiliones, Arachnidae) (Weitere Weberknechte XVIII). *Senckenbergiana, Biol.* 35 1954 : 237-292 pls. 23-26.

Rogoff, W. M. *see* Roberts, I. H. 618.

Rohayem, H. *see* Mohammed, A. H. 514, 515.

631.—Rolfé, S. W. Notes on Diplopoda. II. On one of the rarer of the British Polydesmidae (*Polydesmus testaceus* C. L. Koch). *Ann. Mag. nat. Hist.* (10) 15 1935 : 284-290 figs. 1-10.

- 632.—Rose, I. A review of tick paralysis. *Canad. med. Ass. J.* 70 1954 : 175–176.
- 633.—Rosický, B. Bionomicko-faunistický nástin kliš'tat (Ixodidae) z území ČSR. *Zool. Ent. Listy, Brno* 16 1953 : 120–130.
- 634.—Rosický, B. & Balát, F. Kliš'tě *Ixodes ricinus* L. jako cizopasník v přírodním ohnisku. Die Zecke *Ixodes ricinus* L. als Parasit der Vögel. *Ceskoslov. parasit.* 1 1954 : 45–76 figs. 1–4. [German summary.]
- 635.—Roth, V. D. Review of the spider subgenus *Barronopsis* (Arachnida, Agelenidae). *Amer. Mus. Novit.* No. 1678 1954 : 1–7 figs. 1–6.
- 636.—Roy, A. B. The spiders of Eigg and Mull. *Scot. Nat.* 66 1954 : 35–37.
- 637.—Roy, D. N. & Brown, A. W. A. Entomology (medical and veterinary) including insecticides and insect and rat control. Calcutta (Excelsior Press) 1954 2nd Ed., 413 pp. 10 pls. 192 + 2 figs.
- Rühm, W. *see* Hirschmann, W. 336.
- 638.—Russo, G. Filippo Silvestri: Maestro. *Boll. Lab. Ent. Agr. Portici* 10 1951 : 1–7 photo.
- 639.—Ryke, P. A. J. Two new predatory mites (Acarina: Phytoseiinae) from Proteas in the Western Province. *J. ent. Soc. S. Afr.* 17 1954 : 241–245 figs. 1–6.
- 640.—Sachs, H.-G. Epidemiologie und Bekämpfung der Tracheenmilbe. *Mikrokosmos* 43 1954 : 277–281.
- Sacktor, B. *see* Haynes, H. L. 323.
- Salah, A. A. *see* Hoogstraal, H. 359.
- 641.—Salt, G. A contribution to the ecology of Upper Kilimanjaro. *J. Ecol.* 42 1954 : 375–423 pls. 17–21 figs. 1–3.
- 642.—Sampaio, A., Cruz, A. da & Faia, M. M. Outro artrópodo transmissor de rickettsia "*Dermacentorix conori*" em Portugal. *An. Inst. Med. trop., Lisboa* 10 3 fasc. 1 1953 : 637. [Résumé.]
- Samsonova, A. P. *see* Olsufyev, N. G. 547.
- 643.—Sanchez, S. Les glandes neuro-sécrétrices des Pycnogonides. *C.R. Acad. Sci. Paris* 239 1954 : 1078–1080 figs. 1–2.
- 644.—Sarwar, M. M. & Abdusalam, M. Prevalence of *Ornithodoros tholozani* in the hills of West Pakistan and Kashmir. *Proc. 4th Pakistan Sci. Conf.* pt. 3 1952 : 145.
- 645.—Sasa, M. Description of nymphs and adults of Japanese Trombiculid mites reared in the laboratory. (Studies on Tsutsugamushi Part 54.) *Jap. J. exp. Med.* 23 5 1953 : 407–450 pls. 1–25.
- 646.—Sasa, M. & Jameson, E. W., Jr. The Trombiculid mites of Japan. *Proc. Calif. Acad. Sci.* (4) 28 1954 : 247–321 figs. 1–45.
- 647.—Sasa, M. & Ogata, K. Studies on Tsutsugamushi. Part 53. A new species of the subgenus *Miyatrombicula* with notes on the Trombiculid mites of Hokkaido. *Jap. J. exp. Med.* 23 5 1953 : 333–346, 407–450 figs. 1–7.
- 648.—Saudray, Y. Développement post-embryonnaire d'un iulide indigène *Cylindroiulus (Aneuloboiulus) silvarum* Meinert. *Arch. Zool. exp. gén.* 89 1952 : Notes et Rev. 1–14 figs. 1–8.
- Sauer, H. F. G. *see* Calza, R. 135.
- 649.—Savory, T. H. Scorpions in Britain. [Pseudoscorpiones.] *Discovery* 15 1954 : 233–235 figs. 1–3.
- Scanlon, J. E. *see* Suyemoto, W. 707.
- 650.—Schäfer, R. Beitrag zur Anwendung von PCPBS in der Spinnenmilbenbekämpfung. *Anz. Schädlingssk.* 26 1953 : 180–182 figs. 1–2.
- 651.—Scheller, U. Report from Professor T. Gislén's Expedition to Australia 1951–1952. 6. Symphyla from Western Australia and the Philippines. *Acta Univ. lund. N.F.* 49 16 1954 : 1–9 fig. 1.
- 652.—Scheller, U. Symphyla from the Swedish East African Expeditions in 1937–1938 and 1948, with a summary of the known African species. *Ark. Zool.* 7 1954 : 227–240 pls. 1–2 figs. 1–3.
- 653.—Scheller, U. Symphyla and Pauropoda from Denmark. *Ent. Medd., Københ.* 27 1954 : 1–18 figs. 1–3.
- 654.—Schenkel, E. Bericht über einige Spinnentiere aus Venezuela. *Verh. naturf. Ges. Basel* 64 1953 : 1–57 figs. 1–48.
- Schenkel, E. *see* Handschin, von E. 316.

655.—Schenone, H. Latroectismo y Neostigmina. Bol. chileno Parasit. 9 1954 : 27-28 fig. 1.

Schiapelli, R. D. *see* Pikelin, B. S. G. de 579.

656.—Schiller, E. L., McIntyre, J. C. & Shirbroun, R. E. Preliminary observations on an experimental treatment for demodectic mange in dogs. J. Parasit. 40 1954 : 704-706.

657.—Schmidt, G. Zur Herkunftsbestimmung von Bananenimporten nach dem Besatz an Spinnen. Z. angew. Ent. 36 1954 : 400-422 figs. 1-13.

Schmoelzer, K. *see* Bator, A. 64.

658.—Schömann, K. Das "Paarungs" in Verhalten von *Polyxenus lagurus* L. (Diplopoda). Naturwissenschaften 41 1954 : 310 fig. 1.

659.—Schöttler, W. H. A. On the toxicity of scorpion venom. Amer. J. trop. Med. Hyg. 3 1954 : 172-178.

Schreier, O. *see* Wenzl, H. 789.

660.—Schubart, O. Sobre os Diplopoda dos Estados do Paraná e Santa Catarina. Arq. Mus. Paranaense 10 3 (1953) 1954 : 77-132 figs. 1-33.

661.—Schubart, O. *Haplothyasus tuzetae* n. sp., eine neue Odontopygide von Daloa (Côte d'Ivoire) (Diplopoda, Opisthospermophora). Bull. Inst. franç. Afr. noire 16A 1954 : 506-512 figs. 1-5.

662.—Schubart, O. Eine neue eigenartige Stylodesmide vom Mont Nimba, *Diceratodesmus mimicus* nov. gen., nov. spec. (Proterospermophora, Diplopoda). Bull. Inst. franç. Afr. noire 16A 1954 : 862-868 figs. 1-5.

663.—Schubart, O. Über einige von Professor H. Janetschek in der hochalpin-nivalen Region der Dauphiné gesammelte Diplopoden. Öst. zool. Z. 5 1954 : 350-365 figs. 1-5.

664.—Scorza, J. V. Expedicion Franco-Venezolana del Alto Orinoco. Publicaciones zoológicas. Escorpiones del Alto Orinoco. Bol. Soc. venezol. Cienc. nat. 15 82 1954 : 163-175 figs. 1-5 map.

665.—Scorza, J. V. Sistemática, distribución geográfica y observaciones ecológicas de algunos alacranes encontrados en Venezuela. Mem. Soc. Cienc. nat. La Salle 14 38 1954 : 179-214 pls. 1-6 figs. 1-4. [English summary.]

666.—Scorza, J. V. Dos especies nuevas de alacranes de Venezuela. Noved. cient. Mus. Hist. nat. Caracas No. 12 1954 : 1-11, 2 figs.

667.—Scott, H. Millipedes entering the house. Ent. mon. Mag. 90 1954 : 233.

Sekikawa, K. *see* Asanuma, K. 36, 37.

668.—Sellnick, M. Neue Milben aus Brasilien I.—*Chelonuropoda bispirata* nov. gen., nov. spec. (Acar. Urop.). Dusenja 5 3-4 1954 : 195-208 figs. 1-17.

669.—Sellnick, M. *Indogynium lindbergi* nov. gen., nov. spec., eine neue Acaride aus Indien. Ent. Tidskr. 75 1954 : 285-291 figs. 1-7.

670.—Sellnick, M. Horn-eller mosskvalstren. Svensk Faun. Revy 16 1 1954 : 24-28 figs. 1-5.

671.—Sengbusch, H. G. Studies on the life history of three oribatoid mites with observations on other species (Acarina, Oribatei). Ann. ent. Soc. Amer. 47 1954 : 646-667 figs. 1-27.

672.—Sengbusch, H. G. Studies on the life history of Oribatoid mites (Acarina, Oribatei). J. Parasit. 40 5, Sect. 2 1954 : 29. [Abstract.]

Sen Gupta, C. M. *see* Menon, P. B. 499.

673.—(Shaldibina, E. S.) [Species of Oribatidae as vectors of *Moniezia* in the pastures of Gorkov Province.] K. I. Skryabin anniv. 1953 : 740-746. [In Russian.]

Shamer, D. H. *see* Hunter, G. W. III 366.

Shanahan, G. J. *see* Legg, J. 451.

674.—Shaw, F. R. & Clark, G. Notes on certain ectoparasites in Massachusetts. J. econ. Ent. 46 1953 : 1093-1094.

Sheuchenko, S. F. *see* Bozhenko, V. P. 108.

675.—Shikama, T. A handbook of illustrated fossils from Japanese and their adjacent Territories. Kyôto, 1952. 1952 : 264 text-fig. 59. [In Japanese.]

Shioya, T. *see* Miyazawa, M. 512.

Shirbroun, R. E. *see* Schiller, E. L. 656.

Shluger, E. G. *see* Visotzkaya, S. O. 771.

676.—Shrivastava, S. C. On the dermal glands of some Indian scorpions. *Curr. Sci.* **23** 11 1954 : 363-364 figs. 1-8.

Shulman, R. E. *see* Lutta, A. S. 476.

Sicay, T. C. *see* Suyemoto, W. 707.

Sigwalt, J. *see* Baluzuc, J. 60.

677.—Sikes, R. K. & Chamberlain, R. W. Laboratory observations on three species of bird mites. *J. Parasit.* **40** 1954 : 691-697.

Silvestri, F. *see* Cotronei, G. 185.

Silvestri, F. *see* Russo, G. 638.

678.—Sinclair, K. B. The incidence and life cycle of *Linguatula serrata* (Frohlich 1789) in Great Britain. *J. comp. Path.* **64** 1954 : 371-383.

679.—Sinha, T. B. New species of larval mites from India (Acarina: Trombiculidae). *Parasitology* **44** 1954 : 329-337 figs. 1-4.

680.—Sinha, T. B. Notes on a collection of scorpions from Chota Nagpur. *Proc. nat. Acad. Sci. India* **22** 6 1953 : 44-47.

681.—Sinha, T. B. A new species of *Laelaps* (Laelaptidae: Acarina). *Rec. Indian Mus.* **51** 1954 : 23-25 figs. 1-2.

Skhlyustova, A. I. *see* Olsufyev, N. G. 547.

682.—[Skrynnik, A. N.] [Rôle of various species of *Ornithodoros* in transferring *Spirochaeta* of tick recurrent typhus.] *Zool. Zh.* **33** 1954 : 319-322. [In Russian.]

Skrynnik, A. N. *see* Pavlovskii, E. N. 565.

Smith, C. L. *see* Innes, J. R. M. 375.

683.—Smith, C. N., Cole, M. M., Gilbert, I. H. & Gouck, H. K. Field tests with tick repellents 1949, 1950 and 1952. *J. econ. Ent.* **47** 1954 : 13-19.

684.—Smith, E. J. The basket nest spider *Saccodomus formivorus*. *Qd. Nat.* **15** 1954 : 15-17 figs.

685.—Soares, B. A. M. & Soares, H. E. M. Monografia dos gêneros de Opilões neotrópicos. *Arch. Zool. S. Paulo* **8** 1954 : 225-302.

686.—Soares, B. A. M. & Soares, H. E. M. Algumas notas sobre Opilões, com a descrição de novas formas.

(Opiliones—Gonyleptidae, Phalangodidae). *Pap. Dep. Zool. Sec. Agric. S. Paulo* **11** 1954 : 491-507 figs. 1-17.

687.—[Sorokin, S. V.] [Notes on the ecology of grain mites (Acarina, Tyroglyphoidea) in the nests of ants.] *Ent. Obozr. Moscow* **33** 1953 : 209-213. [In Russian.]

688.—Sousa Dias, V. A. de. Subsídio para o estudo do Ixodídeos de Angola. [Resumo.] *An. Inst. Med. Trop.* **10** 3 fasc. 3 1953 : 2287.

689.—Southcott, R. V. The genus *Neotrombidium* (Acarina: Leeuwenhoekidae). I. Description of the ovum and larva of *Neotrombidium barringtonense* Hirst 1928, with an account of the biology of the genus. *Trans. roy. Soc. S. Aust.* **77** 1954 : 89-97 figs. 1-3.

690.—Southcott, R. V. Description of a new genus and species of larval trombiculid mite from New Guinea. *Trans. roy. Soc. S. Aust.* **77** 1954 : 98-102 figs. 1-3.

691.—Soysa, E. The eosinophilic respiratory syndrome. *Edin. med. J.* **59** 1952 : 45-48 figs. 1-3.

692.—Spencer, H. The golden lady. *Nat. Hist., N.Y.* **63** 1954 : 206-209 8 figs.

693.—Spillane, A. E. Feeding habits of the orchard spider. *Vict. Nat.* **71** 1954 : 50-51.

694.—Srivastava, D. S. Muscles of the rostrum and of the pharynx of scorpions. *Sauger Univ. J.* **1** 2 [1953] : 225-232 2 figs.

695.—Stahnke, H. L. The L.C. treatment of venomous bites or stings. *Amer. J. trop. Med.* **2** 1953 : 142-143.

Stammer, H. J. *see* Noll, W. 543.

696.—Starkoff, O. Contributo alla conoscenza dell'Acarofauna di Roma e dintorni—III. Sottordini Tetrapodili, Sarcoptiformes e Prostigmata. *Riv. Parassit.* **15** 1954 : 663-665.

Stevenson, H. A. *see* Cranham, J. E. 187.

697.—Stock, J. H. Re-description of some of Helfer's Pycnogonid type-specimens. *Beaufortia* **4** 35 1953 : 35-45 6 figs.

698.—Stock, J. H. The Pycnogonids of the lagoon of Venice. *Boll. Soc.*

venez. Stor. nat. 6 1952 : 179-186 figs. 1-3.

699.—Stock, J. H. Four new *Tanystylus* species, and other Pycnogonida from the West Indies. *Natuurwet. Stud. Suriname* No. 10 1954 : 115-129 figs. 24-29.

700.—Stock, J. H. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-1916, lxxvii. Pycnogonida from Indo-West-Pacific, Australian, and New Zealand waters. *Vidensk. Medd. dansk. naturh. Foren. Kbh.* 116 1954 : 1-268 figs. 1-81.

701.—Stout, V. M. *Eylais waikawai* n. sp. (Hydracarina) and some features of the life history and anatomy. *Trans. roy. Soc. N.Z.* 81 1953 : 389-416 figs. 1-6.

702.—Stout, V. M. New species of Hydracarina, with a description of the life history of two. *Trans. roy. Soc. N.Z.* 81 1953 : 417-466 figs. 1-9.

703.—Strandtmann, R. W. & Morlan, H. B. A new species of *Hirstionyssus* and a key to the known species of the world. *Texas Rep. Biol. Med.* 11 4 1953 : 627-637 pls. 1-3. [Not seen.]

704.—Strenzke, K. *Permycobates bicornis* n. gen., n. sp., a new central European moss-mite (Acarina, Oribatei). *Proc. K. Akad. Amst.* 57C 1954 : 92-98 figs. 1-5.

705.—Strenzke, K. Die Belbiden Holsteins (Acarina: Oribatei). *Schr. naturw. Ver. Schl.-Holst.* 24 2 1950 : 63-65 figs. 1-3.

706.—Strenzke, K. *Nematalycus nematoides* n. gen., n. sp. (Acarina Trombidiformes) aus dem Grundwasser der Algerischen Küste. *Vie et Milieu* 4 4 (1953) 1954 : 638-647 figs. 1-5.

707.—Suyemoto, W., Scanlon, J. E. & Sicay, T. C. Ectoparasite fauna of small mammals and birds in the Fuji Maneuver area, Honshu, Japan. *J. Parasit.* 40 1954 : 632-637.

708.—Suzaki, S. Studies on the Japanese harvesters VI. Some new and little known species of the genus *Liobunum* C. L. Koch from Japan, with special reference to the comparative study of penis. *J. Sci. Hiroshima Univ. (Zool.)* 14 1953 : 172-200 figs. 1-12.

709.—Suzuki, T. Studies on the bionomics and chemical control of

Tsutsugamushi (scrub-typhus mites). Part I. *Trombicula akamushi* (Brumpt) in Northwestern Honshu, Japan. *Jap. J. exp. Med.* 23 1953 : 487-516 figs. 1-4.

Sweetman, H. L. *see* Madden, A. H. 481.

710.—Szalay, L. Wassermilben (Hydrachnellae) aus dem Kis-Balaton. *Acta zool., Budapest* 1 1954 : 129-153 fig. 1.

711.—Szalay, L. Wassermilben (Hydrachnellae) aus der Umgebung von Bátorliget. *Ann. hist. nat. Mus. hung. N.S.* 5 1954 : 203-213 figs. 1-6.

712.—Szalay, L. Über eine neue und zwei verhältnismässig seltene Wassermilben (Hydrachnellae). *Ann. Biol. hung.* 2 1954 : 153-157 figs. 1-3.

713.—Taboada, M. de F. Pulmonary acariasis in Spain. An illustrative case report. *Brit. med. J. No.* 4859 1954 : 437-438 figs. 1-2.

714.—Takakuwa, Y. The Diplopods of Japan and its adjacent territories. *Tokyo* 1954 : 1-241 + 1-10 figs. 1-253, frontispiece photo. [In Japanese with descriptions in German of new species.]

715.—Tams-Lyche, H. Arachnoidea from South Georgia and the Crozet Islands with remarks on the subfamily Masoninae. *Sci. Res. Norweg. antarct. Exped. 1927-1928 et sqq., No. 35* 1954 : 1-19 figs. 1-5.

716.—Tappi, M. Tardigradi del Piemonte. *Boll. Ist. Zool. Univ. Torino* 3 1952 : 103-118 figs. 1-4.

717.—Tarras-Wahlberg, N. Oribatids from the Åkult-mire. *Oikos* 4 [1954] : 166-171 map.

718.—Taufflieb, R. Quelques *Laelaps* nouveaux (Acarina: Laelaptidae) du Moyen Congo (Afrique Equatoriale Française). *Ann. Parasit. hum. comp.* 29 1954 : 436-446 figs. 1-5.

719.—Taylor, R. M. & Hurlbut, H. S. Isolation of West Nile virus from *Culex* mosquitoes. *J. Roy. Egypt. Med. Assoc.* 36 1953 : 199-208.

720.—Tendeiro, J. Transmissão da "*Coxiella burneti*" pelo "*Rhipicephalus simus senegalensis*" Koch 1844.—Estudo da estirpe em cultura e nalguns animais de experiência. *Bol. cult. Guine* 7 26 1952 : 291. Résumé in *An. Inst. Med. trop. Lisboa* 10 3 fasc. 1 1953 : 639-640.

721.—Tendeiro, J. Ixodideos da Guiné Portuguesa. Notas teratológicas. Bol. cult. Guiné portug. 6 22 1951: 339-363. [Not seen.]

722.—Tendeiro, J. Alguns ectoparasitas recolhidos nos Bijagós. Garcia de Orta 1 1953: 263-265.

723.—Tendeiro, J. Nota sobre uma pupipara e um ixodídeo de Caba Verde. *Hippobosca maculata* Leach 1817 e *Amblyomma variegatum* [Fabricius 1794] Garcia de Orta 2 1954: 199-203 pl. 1.

724.—[Ter-Vartanov, V. N., Gusev, V. M., Bakeev, N. N., Labunetz, N. F., Guseva, A. A. & Reznik, P. A.] [The problem of transference of mammalian ectoparasites by birds.] Zool. Zh. 33 1954: 1116-1124. [In Russian.]

725.—Theiler, G. & Robinson, B. N. Tick survey VIII.—Checklists of ticks recorded from the Belgian Congo and Ruanda Urundi, from Angola and from Northern Rhodesia. Onderstepoort J. vet. Res. 26 1954: 447-461 maps 1-4.

726.—Théodoridés, J. Première contribution à l'étude des ectoparasites de vertébrés des Pyrénées-Orientales. Vie et Milieu 4 (1953) 1954: 753-756.

727.—Therrien, A. A., Hunter, G. W., Moon, A. P. & Adams, A. L. Tests of potential acaricides against the Lone Star tick. J. econ. Ent. 47 1954: 76-78.

Thienpont see Jadin, J.-B. 378.

728.—Thompson, G. B. Ectoparasites. Rep. Lundy Fld. Soc. No. 7 1953 [1954]: 24-27.

729.—Till, W. N. Resultados de um reconhecimento zoológico no Alto Limpopo efectuado pelos Drs. F. Zumpt e J. A. T. Santos Dias.—Five new feather mites of the genus *Pterodectes* (Acarina: Analgesidae). Moçambique No. 79 1954: 85-100 figs. 1-10.

730.—Till, W. M. The genus *Trouesartia* in the Ethiopian region with descriptions of three 'new species' (Acarina: Protophyllodidae). Rev. Ecuat. Ent. Par. 2 1-2 1954: 187-202 figs. 1-10.

Till, W. M. see Zumpt, F. 825, 826, 827, 828, 829.

Tinker, M. E. see English, L. L. 243.

Toit, R. du see Fiedler, O. G. H. 259.

Toshioka, S. see Jameson, E. W. Jr. 381.

Tozloski, H. A. see Madden, A. H. 481.

731.—Traub, R. & Audy, J. R. Malaysian parasites IV.—Species of *Trombicula* (Acarina - Trombiculidae) from Borneo. Stud. Inst. med. Res. F.M.S. No. 26 1954: 45-76 figs. 1-94.

732.—Traub, R. & Audy, J. R. Malaysian parasites V.—Species of *Euschöngastia sensu lato* (Acarina - Trombiculidae) from Borneo. Stud. Inst. med. Res. F.M.S. No. 26 1954: 77-88 figs. 1-53.

733.—Traub, R. & Evans, T. M. Malaysian parasites. VI.—Indo-Malaysian chiggers of the subgenus *Schöngastiella* (Acarina - Trombiculidae). Stud. Inst. med. Res. F.M.S. No. 26 1954: 89-107 figs. 1-76.

734.—Traub, R., Newson, H. D., Walton, B. C. & Audy, J. R. Efficacy of dieldrin and aldrin in area control of the chigger vectors of scrub typhus. J. econ. Ent. 47 1954: 429-435.

Travis, D. F. see Waterman, T. H. 783.

735.—Treat, A. E. A new Gamasid (Acarina: Mesostigmata) inhabiting the tympanic organs of Phalaenid moths. J. Parasit. 40 1954: 619-631 pls. 1-4 figs. 1-2.

736.—Tretzel, E. Zur Ökologie der Spinnen (Araneae). Autökologie der Arten im Raum von Erlangen. S.B. phys.-med. Soz. Erlangen 75 1952: 36-131. [Not seen.]

737.—Tretzel, E. Reife und Fortpflanzungszeit bei Spinnen. Z. Morph. Ökol. 42 1954: 634-691 figs. 1-24.

Turk, F. A. see Blair, R. H. 92.

738.—Tuzet, O. & Manier, J.-F. Les spermatozoïdes de quelques Myriapodes Chilopodes et leur transformation dans le réceptacle séminal de la femelle. Ann. Sci. nat. (Zool.) (11) 15 1954: 221-230 figs. 1-2.

739.—Tuzet, O. & Manier, J.-F. La spermatogenèse d'*Himantarium gabrielis* Meinert. Ann. Sci. nat. (Zool.) (11) 15 1954: 231-239 figs. 1-3.

740.—Tuzet, O. & Manier, J.-F. Les organes hématopoiétiques et le sang des Myriapodes Diplopodes (Etude par le microscope à contraste de phase). Bull. biol. 88 1954: 90-98 figs. 1-4.

741.—Tweedie, M. W. F. & Harrison, J. L. Malayan animal life, London (Longmans, Green & Co.) 1954, pp. x + 237, frontis., 154 figs.

Ungria, C. D. *see* Vergani, F. 763.

742.—Utinomi, H. The fauna of Akkeshi Bay. XIX. Littoral Pycnogonida. Publ. Akkeshi mar. biol. Sta. No. 3 1954 : 1-28 pl. 1 figs. 1-11.

Utterback, B. S. *see* Morlan, H. B. 521.

743.—Vachon, M. Remarques sur un Pseudoscorpion vivant dans les ruches d'Abeilles au Congo Belge, *EUingsenius hendrickxi* n. sp. Ann. Mus. Congo belge N.S. 4to Zool. 1 1954 : 284-287 fig. 1.

744.—Vachon, M. Contribution à l'étude du peuplement de la Mauritanie. Pseudoscorpions. Bull. Inst. franç. Afr. noire 16 A4 1954 : 1022-1030 figs. 1-10.

745.—Vachon, M. Nouveaux cas de phorésie chez les Pseudoscorpions. Bull. Mus. Hist. nat. Paris (2) 25 6 (1953) 1954 : 572-575.

746.—Vachon, M. Remarques morphologiques et anatomiques sur les Pseudoscorpions (Arachnides) appartenant au genre *Pseudoblothrus* (Beier) (Fam. Syarinidae J.C.C.). Bull. Mus. Hist. nat. Paris (2) 26 1954 : 212-219 figs. 1-9.

747.—Vachon, M. Nouvelles captures de Pseudoscorpions (Arachnides) transportés par des insectes. Bull. Mus. Hist. nat., Paris (2) 26 1954 : 590-592.

748.—Vachon, M. Quelques réflexions sur la répartition actuelle et passée des Onychophores ou Péripates. C.R. Soc. Biogéogr. 30 259-262 1954 : 44-46 map.

749.—Vachon, M. La réserve naturelle intégrale du Mt. Nimba I.—Scorpions. Mission M. Lamotte en Guinée (1942). Mém. F.A.N. No. 19. Rés. Mont Nimba 1952 : 9-15 figs. 1-12.

750.—Vachon, M. La réserve naturelle intégrale du Mt. Nimba II.—Pseudoscorpions. Mém. F.A.N. No. 19. Rés. Mont Nimba 1952 : 17-43 figs. 1-41.

751.—Vachon, M. A propos d'un Pseudoscorpion cavernicole découvert par M. le Dr. H. Henrot, dans une grotte de la Virginie occidentale, en Amérique du Nord. Notes biospéologiques 7 1952 : 105-112 figs. 1-13.

752.—Vachon, M. Les Hamada Sud-Morocaines. Résultat de la Mission d'Étude 1951 de l'Institut Scientifique Chérifien et du Centre des Recherches Sahariennes. Zoologie. II. Scorpions. Trav. Inst. sci. Chérifien. Sér. Gén. No. 2 1954 : 187-188.

753.—Vachon, M. Essai d'une biogéographie des Scorpions tunisiens. 70th Congr. A.F.A.S. Tunis fasc. 4 1951 : 1-6 figs. 1-2.

Vachon, M. *see* Pavan, M. 562.

754.—Vaerenbergh, R. van. Notes relatives à quelques déterminations de tiques du Ruanda-Urundi et du Congo Belge. Bull. Ann. Soc. ent. Belg. 90 1954 : 222-226.

755.—[Vainshtein, B. A.] [On the fauna of spinning mites damaging fruit tree cultivation in southern Kazakhstan.] Zool. Zh. 33 1954 : 561-564 figs. 1-3. [In Russian.]

756.—Valle, A. Revisione di generi e sottogeneri berlesiani di Acari. Redia 38 1953 : 316-360 pls. 5-7 figs. 1-13.

757.—Van den Eeckhoudt, J. P. A propos de l'Araignée-Frelon (*Argiope bruennichi* Scop.). Nat. belges 34 7-8 1953 : 135-136.

758.—Vellard, J. Immunité des araignées à leur propre Venin. An. Acad. bras. Cienc. 26 1954 : 179-185 figs. 1-4.

759.—Vellard, J. Préparation d'un sérum contre le venin de "*Loxosceles laeta*." C.R. Acad. Sci. Paris 238 1954 : 2578-2579.

760.—Vercammen-Grandjean, P.-H. La nymphe de *Fainiella womersleyi* (Trombididae: Acarina). Rev. Zool. Bot. afr. 49 1954 : 29-32 figs. A-B.

761.—Vercammen-Grandjean, P.-H. Discussion sur l'opportunité de créer une sous-famille intermédiaire entre Trombiculinae et Gahrlepiinae. Rev. Zool. Bot. afr. 50 1954 : 29-32.

Vercammen-Grandjean, P.-H. *see* Jadin, J. B. 377, 378, 379, 380.

762.—Vergani, A. R. Ácaros de interés económico para nuestros cultivos. Rev. Invest. agric., B. Aires 7 3 1953 : 213-252 figs. 1-18.

763.—Vergani, F. & Ungria, C. D. Bibliografía veterinaria venezolana.

(Fichero venezolano de bibliografía veterinaria y ganadera.) Bol. Inst. Invest. vet. Caracas 5 21 1953 : 1-1895.

764.—Viets, K. Süßwassermilben (Hydrachnellae, Acari) aus Südamerika. Arch. Hydrobiol. 49 1954 : 1-224 pls. 1-20 figs. 1-229.

765.—Viets, K. Wassermilben aus dem Amazonasgebiet (Hydrachnellae, Acari) (Systematische und ökologische Untersuchungen). Bearbeitung der Sammlungen Dr. R. Braun, Aarau, und Dr. H. Sioli, Belém. Schweiz. Z. Hydrol. 16 1-2 1954 : 78-151 : 161-248 pls. 1-4.

766.—Viets, K. Neue Wassermilben (Hydrachnellae, Acari) von Corsica. Zool. Anz. 152 1954 : 305-308 figs. 1-4.

767.—Viets, K. & Plate, H.-P. Die ökologischen (parasitologischen) Beziehungen zwischen Wassermilben (Hydrachnellae, Acari) und Süßwasser-Mollusken. Z. angew. Ent. 35 4 1954 : 459-494 figs. 1-9.

768.—Viets, K. & Viets, K. O. Die Wassermilben des Bremer Raumes. (Hydrachnellae et Porohealacaridae, Acari). Abh. naturw. Ver. Bremen 33 3 1954 : 327-375.

769.—Viets, K. O. Wassermilben (Hydrachnellae) aus dem See von Sendelbach und anderen Orten Unterfrankens. Nachr. naturw. Mus. Aschaffenburg No. 45 1954 : 47-78 pls. 7-8.

770.—Villiers, A. Types déposés au Muséum National d'Histoire Naturelle par l'Institut Français d'Afrique Noire (5e liste). Bull. Mus. Hist. nat. Paris (2) 26 1954 : 457-459.

771.—[Visotzkaya, S. O. & Shluger, E. G.] [Larvae of Trombiculids, parasites of rodents in Leningrad Province.] Mag. Parasit., Leningr. 15 1953 : 345-352 figs. 1-6. [In Russian.]

772.—Vogelsang, E. G. & Dias, J. A. Travassos Santos. Contribucion al estudio de la fauna ixodológica de Venezuela. Rev. Med. vet. Caracas 12 1953 : 3-62 figs. 1-10. [English summary.]

773.—Vogelsang, E. G. & Dias, J. A. Travassos Santos. Nueva contribucion al estudio de la fauna ixodologica de Venezuela. Rev. Med. vet., Caracas 12 1953 : 63-89 figs. 1-6. [English summary.]

774.—[Volgin, V. I.] [Two new species of Tyroglyphid mites.] (Acarina-Tyroglyphidae). Ent. Obozr., Moscow 33 1953 : 262-265 5 figs. [In Russian.]

775.—Vrydagh, J.-M. & Cooreman, J. L'araignée rouge du coton au Congo belge. Bull. agric. Congo belge 44 1953 : 1325-1334 figs. 1-3.

776.—Wagner, H. O. Massenan-sammlungen von Weberknechten in Mexiko. Z. Tierpsychol. 11 1954 : 349-352 figs. 1-3.

Wagner, O. see Geigy, R. 285.

777.—Wahhab, A. A. The formation of the germ layers and their embryonic coverings in the scorpion, *Buthus quinquestriatus* (H.E.). Proc. Egypt. Acad. Sci. 10 1954 : 110-118 2 pls.

778.—Walker, V. C. R. Demodectic mange in mink. Vet. Med. 48 1953 : 466-467 figs. 1-3.

Walton, B. C. see Traub, R. 734.

779.—Waterman, T. H. Directional sensitivity of single ommatidia in the compound eye of *Limulus*. Anat. Rec. 117 1953 : 566.

780.—Waterman, T. H. Action potentials from an arthropod ocellus: the median eye of *Limulus*. Proc. nat. Acad. Sci. Wash. 39 1953 : 687-694 fig.

781.—Waterman, T. H. Directional sensitivity of single ommatidia in the compound eye of *Limulus*. Proc. nat. Acad. Sci. Wash. 40 1954 : 252-257 figs. 1-5.

782.—Waterman, T. H. Polarized light, and angle of stimulus incidence in the compound eye of *Limulus*. Proc. nat. Acad. Sci. Wash. 40 1954 : 258-262 figs. 1-4.

783.—Waterman, T. H. & Travis, D. F. Respiratory reflexes and the flabellum of *Limulus*. J. cell. comp. Physiol. 41 1953 : 261-289 pl. 1 figs. 1-4.

784.—Waterman, T. H. & Wiersma, C. A. G. The functional relation between retinal cells and optic nerve in *Limulus*. J. exp. Zool. 126 1954 : 59-85 figs. 1-4.

785.—Waterman, T. H. & Wiersma, C. A. G. The nature of the single units in the *Limulus* optic nerve. XIX Intern. Congr. Phys. Montreal 1953 Abst. Comm.: 872-873.

Weglarska, B. see Pigon, A. 578.

786.—Weidner, H. Die Pseudo-skorpione, Weberknechte und Milben der Umgebung von Hamburg mit besonderer Berücksichtigung der für den Menschen wichtigen Arten. Ent. Mitt. Zool. Staats. Zool. Mus. Hamb. Nr. 4 1954 : 1-54.

787.—Weidner, H. Ein Beitrag zur Spinnentierfauna von Unterfranken. Nachr. naturw. Mus. Aschaffenh. No. 42 1954 : 45-48.

788.—Weir, H. T. Trypan blue and furaspor concentrate in the treatment of demodectic mange. J. Amer. vet. med. Assoc. 125 928 1954 : 66-67.

Wene, G. P. *see* Griffith, R. D. 308.

789.—Wenzl, H. & Schreier, O. Spinnmilbensschäden (*Tetranychus althaeae* v. Hanst.) an Zuckerrübe. Anz. Schädlingsk. 26 1953 : 49-50 figs. 1-2.

790.—West, W. R., Jr. An anatomical and cytological study of the male reproductive system of a Virginia millipede. Abstr. Diss. Univ. Virginia 1952 1953 : 67-69.

Whalley, P. E. S. *see* Hobart, J. 338.

791.—Wharton, G. W. Observations on the feeding of prostigmatid larvae (Acarina: Trombidiformes) on arthropods. J. Wash. Acad. Sci. 44 1954 : 244-245 1 fig.

792.—Wharton, G. W. Life cycle and feeding habits of *Myobia musculi*. J. Parasit. 40 5, Sect. 2 1954 : 29. [Abstract.]

Wharton, G. W. *see* Cross, H. F. 192.

793.—Whatmough, G. W. Arachnology. Trans. Lincs. Nat. Un. 13 1954 : 200-202.

794.—Wiehle, H. & Franz, H. Die Nordost-Alpen 20.—Ordnung: Araneae. SPIEGEL Land-Tierwelt Innsbruck 1 1954 : 473-557 2 figs.

Wiersma, C. A. G. *see* Waterman, T. H. 784, 785.

795.—Wilcomb, M. J. Jr., Griffith, M. E. & Ellis, L. L. Commensal rat ectoparasite collections in Oklahoma. Publ. Hlth. Monogr. No. 5 1952 : 31-37.

796.—Wiley, A. J. Common ticks on livestock in Kenya. E. Afr. agr. J. 19 1954 : 5-10 figs.

797.—Williams, A. J. Biology of the common red spider. J. Kansas ent. Soc. 27 1954 : 97-99.

798.—Williams, G. Fauna of Strangford Lough and neighbouring coasts. Proc. R. Irish Acad. 56B 3 1954 : 29-133 3 pls.

Williams, J. S. *see* Hunter, G. W. III 366.

799.—Willmann, C. Mährische Acari hauptsächlich aus dem Gebiete des Mährischen Karstes. Českoslov. parasit. I 1954 : 213-272 figs. 1-23.

800.—Willmann, C. Neue Milben aus den östlichen Alpen. S.B. öst. Akad. Wiss., Abt I 162 1953 : 449-519 figs. 1-52.

801.—Wilson, S. G. *Rhipicephalus hurti* n. sp. (Ixodidae) from Kenya game and domestic animals. Parasitology 44 1954 : 277-284 figs. 1-4.

802.—Witkind, J. Nota sobre los arácnidos ponzoñosos del Uruguay particularmente *Loxosceles laeta*. An. Fac. Med. Montevideo 38 9-10 1953 : 351-358.

803.—Womersley, H. A new species of *Trombicula* (Acarina: Trombiculidae) from bats from Northern Australia. Ann. Mag. nat. Hist. (12) 7 1954 : 827-828 fig. 1.

804.—Womersley, H. Species of the subfamily Phytoseiinae (Acarina: Laelaptidae) from Australia. Aust. J. Zool. 2 1954 : 169-191 figs. 1-12.

805.—Womersley, H. Two new species of mites (Acarina: Mesostigmata: Ascacidae) associated with bark-boring beetles from South Australia. Rec. S. Aust. Mus. 11 1954 : 113-116 figs. 1-2.

806.—Womersley, H. Two new species of ectoparasitic mites from pouched mice, *Sminthopsis* from Australia. Rec. S. Aust. Mus. 11 1954 : 117-120 figs. 1-2.

807.—Womersley, H. On the subfamily Trombellinae Sig Thor 1935 (Acarina: Trombididae) with the diagnosis of the nymph of *Audiana thompsoni* Womersley, 1954. Rec. S. Aust. Mus. 11 1954 : 121-128 figs. 1-2.

808.—Womersley, H. Malaysian parasites VII. New genera and species, apparently of Apoloniinae (Acarina, Leeuwenhoeekiidae), from the Asiatic-Pacific region. Stud. Inst. med. Res. F.M.S. No. 26 1954 : 108-119 figs. 1-4.

809.—Womersley, H. Malaysian parasites VIII. On the validity of those genera of Trombiculidae (Acarina) with posterolateral setae off the scutum. Stud. Inst. med. Res. F.M.S. No. 26 1954 : 120-122.

810.—Womersley, H. A new genus and species of Speleognathidae (Acarina) from South Australia. Trans. roy. Soc. S. Aust. 76 1953 : 82-84 figs. A-H.

811.—Womersley, H. Eight new species of Trombiculidae (Acarina) from Queensland. Trans. roy. Soc. S. Aust. 77 1954 : 67-80 figs. 1-8.

812.—Womersley, H. Another new species of *Boydaiia* (Speleognathidae; Acarina) from Australia. Trans. roy. Soc. S. Aust. 77 1954 : 65-66 figs. A-G.

Womersley, H. *see* Derrick, E. H. 208.

813.—Wood, O. E. Coventry Nature Reserve records—Additions to lists previously published. Proc. Coventry nat. Hist. sci. Soc. 2 1954 : 229-231.

814.—Woodroffe, G. E. An additional note on the fauna of birds' nests in Britain. Bull. ent. Res. 45 1954 : 135-136.

815.—Woolley, T. A. A new species of box-mite from Colorado (Oribatei: Phthiracaridae). Amer. Midl. Nat. 52 1954 : 197-200 figs. 1-3.

Worth, C. B. *see* Mackie, C. B. 480.

816.—Yaginuma, T. Note on the Japanese spiders *Leucauge* (included a new species). Arachnol. News, Osaka No. 2 1954 : 1-4 figs. 1-15. [In Japanese with English summary.]

Yamolova, N. S. *see* Olsufyev, N. G. 547.

Yevick, P. P. *see* Innes, J. R. M. 375.

817.—Yoshikura, M. On the tracheae in a Liphistiid spider, *Heptathela kimurai*. Kumamoto J. Sci. No. 3B 1954 : 37-40 figs. 1-3.

818.—Yoshikura, M. Embryological studies on the Liphistiid spider, *Heptathela kimurai*. Part 1. Kumamoto J. Sci. No. 3B 1954 : 41-48 pl. 1 fig. 1.

819.—Young, M. T. & Gaines, R. C. Control of insects and spider mites on cotton 1953. J. econ. Ent. 47 1954 : 753-756.

820.—Yutuc, L. M. The occurrence of a nymphal Linguatulid (Arthropoda: Pentastomida) in the lungs of the domestic cat. Philipp. J. Sci. 83 2 1954 : 119-121 pl. 1.

Zacher, F. *see* Zwölfer, W. 830.

821.—[Zakhvatkin, A. A.] [Division of Acarina into Orders and their position in the system of Chelicerata.] Mag. Parasit., Moscow 14 1952 : 5-46 figs. 1-30. [In Russian.]

Zaky, O. *see* Mohammed, A. H. 514, 515.

822.—[Zemskaya, A. A.] [Collecting and laboratory breeding of the rat mite *Bdellonyssus bacoti* Hirst, 1913.] Zool. Zh. 33 2 1954 : 350-355 fig. [In Russian.]

823.—Zilch, A. Onychophoren aus El Salvador. Senckenbergiana, Biol. 35 1954 : 147-150 pl. 12 figs. 1-3.

824.—Zilch, A. Ein neuer *Oroperipatus* aus Peru (Onychophora). Senckenbergiana, Biol. 35 1954 : 151-154 pl. 13 figs. 1-3.

825.—Zumpt, F. & Till, W. The genera *Turkiella* nov. (= *Androlaelaps* Auct.) and *Haemolaelaps* in the Ethiopian region, with keys and descriptions of three new species. (Acarina: Laelaptidae.) An. Inst. Med. trop., Lisboa 10 1953 : 215-249 figs. 1-16.

826.—Zumpt, F. & Till, W. The genus *Steatonyssus* Kolenati in the Ethiopian region (Acarina: Laelaptidae). J. ent. Soc. S. Afr. 17 1954 : 47-57 figs. 1-4.

827.—Zumpt, F. & Till, W. M. The lung and nasal mites of the genus *Pneumonyssus* Banks (Acarina: Laelaptidae) with description of two new species from African primates. J. ent. Soc. S. Afr. 17 1954 : 195-221 figs. 1-6.

828.—Zumpt, F. & Till, W. Four new bloodsucking mites from the Ethiopian region (Acarina, Laelaptidae and Spinturnicidae). Rev. Ecuat. Ent. Par. 2 1954 : 209-218 figs. 1-7.

829.—Zumpt, F. & Till, W. The genus *Liponyssus* Kolenati in the Ethiopian region. (Acarina: Laelaptidae.) S. Afr. J. med. Sci. 18 1953 : 5-12 figs. 1-4.

830.—Zwölfer, [W.]. Friedrich Zacher (zum 70. Geburtstag). Z. angew. Ent. 36 1954 : 236-338 photo.

II.—SUBJECT INDEX

The number in Clarendon indicates the full reference in the list of titles.

MEROSTOMATA

GENERAL LITERATURE AND HISTORY

General works.—Introduction to the systematics of the Acari in relation to the Chelicerata, ZAKHVATKIN 821.

Text - books. — Japanese fossils [Eurypt.], SHIKAMA 675.

PHYSIOLOGY

Respiration.—Reflexes in *Limulus*, WATERMAN & TRAVIS 783.

Senses.—Eye of *Limulus*, WATERMAN 779, 780, 781, 782; Optic nerve in *Limulus*, WATERMAN & WIERSMA 784, 785.

DISTRIBUTION

Gulf of Mexico.—Xiphos., HEDGPETH 325.

Silurian. — *Hughmilleria norvegica*, North Norway, HOLTEDAH 353.

ARACHNIDA

GENERAL LITERATURE AND HISTORY

Text-books.—Spiders of Holland, CHRYSANTHUS 156; Hydrach. and Tardig., MELLANBY 498; Freshwater microscopy, GARNETT 284; Invertebrate fossils, MOORE ET AL. 518; Microtomist's formulary and guide, GRAY 304.

History.—Ricketts and tick transmission of Rocky Mountain fever, PHILIP 575.

Bibliography.—Nathan Banks, CARPENTER & DARLINGTON 141; E. Schenkel, HANDSCHIN 316.

Obituary.—Nathan Banks—13 April 1868 to 24 January 1953, CARPENTER & DARLINGTON 141; Ehrenfried Schenkel 1869–1953, HANDSCHIN 316; F. Silvestri, COTRONEI 185; F. Silvestri, RUSSO 638.

Nomenclature.—Eligibility of Koch, C. L. selected type species, OPINION 204; Rejection of *Liodes* Heyden 1826 as invalid homonym of *Leiodes* Latreille

1796, OPINION 218; Validation of the generic name *Limulus*, OPINION 320; Use of "chigger" for larval Trombiculids, AUDY 43; The gender of *Sason*, BONNET 94; On the use of *Tegenaria domestica*, BONNET 95; The question *Acrosoma*, *Micrathena*, *Plectana*, BONNET 96; The problem *Agelena*—*Agalena*, BONNET 97.

Museum: Collections.—Catalogue of Arach. fossils in New York State Museum, KILFOYLE 408; Scorp., Aran. of Instituto Butantan, BÜCHERL 124; Revision of C. J. Neuman Hydracarina, LUNDBLAD 473; Types from Inst. franç. Afr. noire deposited in Paris, VILLIERS 770.

STRUCTURE

Text-books.—Integument of Arthropods, RICHARDS 609.

External anatomy.—Segmentation of cephalothorax of *Eurypelma californicum*, FIRSTMAN 262; Aran., CHRY-SANTHUS 156; Chelicerae of Aran., BRISTOWE 117; Chelicerae of *Digamasellus*, HIRSCHMANN 334; *Histiostoma laboratorum*, PERRON 569; Segmentation of cephalothorax of *Eremobates purpusi* and *Mastigoproctus giganteus*, HENRY 331; Number of articles of the appendages of actinochitin Acari, GRANDJEAN 296; Palaeacaroides, GRANDJEAN 302.

Internal anatomy.—*Histiostoma laboratorum*, PERRON 569; *Listrophorus leuckarti*, HUGHES 365; *Eylais waikawai*, STOUT 701; *Raillietiella amphiboluri*, MAHON 482.

Integument.—Dermal glands of Scorp., SHRIVASTAVA 676; Epicuticle of *Palamneus swammerdami*, KRISHNAN 422; *Ixodes ricinus*, DANIEL & LUDVIK 196, 197.

Muscles.—Rostrum and pharynx of Scorp., SRIVASTAVA 694; *Eurypelma californicum*, FIRSTMAN 262.

Alimentary system.—Comparison of the gut in Hydrach., BADER 49; *Acarapis woodi*, KLUMPF 412.

Respiratory system.—Tracheae in *Heptathela kimurai*, YOSHIKURA 817; Spiracle in *Ornithodoros moubata*, BROWNING 122.

Nervous system.—*Eurypelma californicum*, FIRSTMAN 262; Neurosecretive cells in Aran., GABE 280; *Eremo-*

bates purpuri and *Mastigoproctus giganteus*, HENRY 331; *Acarapis woodi*, KLUMPP 412; Neurosecretive cells in Aran., LEGENDRE 449; Neuro-secretive glands in Pantop., SANCHEZ 643.

Excretory system.—*Acarapis woodi*, KLUMPP 412.

Reproductive system.—*Buthus quinquestriatus*, ABD-EL-WAHAB 5.

Genital system.—*Histiostoma laboratorium*, PERRON 569.

Glands.—Prosomatic glands in *Tege-naria* and new sense organ, LEGENDRE 448.

Special structures.—Spinnerets of spiders, KLEIN 410.

Teratology.—Two-tailed scorpion, LEWIS 461; *Erigone vagans spinosa*, KNÜLLE 415; Twin embryos of *Latrodectus mactans*, REMPEL 601; *Haemaphysalis l. leachi*, DIAS 221; Ixod., DIAS 210.

Technique.—Mounting media, GRAY 304; Mounting media, KEIFER 402, 404, 405; Casts of scutum of *Ixodes ricinus*, DANIEL & LUDVIK 196.

Cytology.—Yolk-nucleus of *Plexippus paykulli*, NATH & DHAWAN 531.

PHYSIOLOGY

Nutrition.—*Nemastoma quadripunctatum*, IMMEL 373.

Osmotic relations; Water balance.—In *Ornithodoros moubata*, BROWNING 121; Water balance and transpiration in Aran., NEMENZ 534.

Respiration.—Arach., LAWRENCE 446; Tardig., PIGON & WEGŁARSKA 578.

Senses.—*Nemastoma quadripunctatum*, IMMEL 373; Arach., LAWRENCE 446.

Secretion: internal.—Neurosecretive cells in Aran., GABE 280; Neurosecretive cells in *Phalangium opilio*, GABE 281; Neurosecretive cells in Aran., LEGENDRE 449.

Growth.—Rôle of integument in acarine development, JONES 389.

Longevity.—Arach., LAWRENCE 446; *Tetranychus bimaculatus*, WILLIAMS 797.

Bio-chemistry.—Muscle of *Androctonus australis*, LISSITZKY ET AL. 465; Gut epithelium of *Ixodes ricinus*, HUGHES 364.

Venom.—**Scorpiones:** *Buthacus arenicola*, BÉDÉ 66; Action of toxin of *Buthus quinque-striatus* on blood sodium and potassium, MOHAMMED ET AL. 514; Influence of venom of *Buthus quinque-striatus* on mammalian erythrocytes, MOHAMMED ET AL. 515; Effects of venom of *Centruroides insulans*, BAERG 51; *Heterometrus longimanus*, HARRISON 319; Research with *Parabuthus biosoma abyssinicus* and *Pandinus magretti*, CILLI & CORAZZI 159; *Tityus bahiensis* and *T. serrulatus*, BÜCHERL 123; Toxicity of venom of *Tityus bahiensis* and *T. serrulatus*, SCHÖTTLER 659; Scorp. in Jamaica, BAERG 53; Treatment of scorpion sting, STAHNKE 695.

Venom.—**Araneae:** *Phoneutria nigri-venter*, BÜCHERL 125, 126; Anti-venom serum against *Loxosceles laeta*, VELLARD 759; *Latrodectus geometricus*, BAERG 50; Effects of venom of *Latrodectus mactans* & *L. geometricus*, BAERG 52; Effect of venom of *Latrodectus mactans*, CICARDO 158; Bite of *Latrodectus mactans*, ALLINGTON & ALLINGTON 7; *Latrodectus mactans*, COHEN 166; Treatment of bite of *Latrodectus mactans*, SCHENONE 655; Case reports of bite of *Latrodectus* 13-guttatus, BETTINI ET AL. 86; Report of bite of *Latrodectus tredecimguttatus*, MARETIĆ 488; Case report of bite of brown widow spider, MACDONALD 477; Immunity of spiders, VELLARD 758.

Toxins.—Reaction of skin of laboratory animals to bite of argasid tick, RIEK & LAVOPIERRE 613; Reaction of skin to bite of Trombid larvae, PFLUGFELDER 574; Tick bites, ALLINGTON & ALLINGTON 7; Treatment of bites and stings, ANON. 3.

Locomotion.—Arach., LAWRENCE 446.

Fluorescence.—In Arach., LAWRENCE 446; In integument of Scorp., PAVAN & VACHON 562.

Effects of environment.—On *Ornithodoros papillipes*, PAVLOVSKI 563.

Effects of temperature and light.—*Paratetranychus pilosus* Can. & Fanz., BECKER 65; *Ornithodoros papillipes* whilst feeding, NEUMIN 537.

Effects of salinity.—On Tardig., COLLIN & MAY 167.

Effect of chemicals.—On *Tetranychus bimaculatus*, EBELING & PENCE 236; *Tetranychus bimaculatus*, LE ROUX 454.

Behaviour.—Function of palpal organ of Solif., CLOUDSLEY-THOMPSON 163; Uses of chelicerae of spiders, BRISTOWE 117; Drinking soil capillary water by *Lycosa radiata* and *Tarentula barbipes*, PARRY 559.

REPRODUCTION AND SEX

Reproduction.—Arach., LAWRENCE 446; *Centruroides insulans*, BAERG 51; *Nemastoma quadripunctatum*, IMMEL 373.

Sex relations.—Copulation of *Eucta kaestneri*, CROME 190.

DEVELOPMENT

Development.—Arach., LAWRENCE 446; *Nemastoma quadripunctatum*, IMMEL 373; *Brevipalpus inornatus*, MORISHITA 520; *Galumna elimatus ithacensis*, *G. nervosus*, *G. longipluma*, SENGBUSCH 671; *Histiostoma laboratorium*, PERRON 569.

Spermatogenesis.—*Himantarium gabrielis*, TUZET & MANIER 739.

Embryology.—*Buthus quinquestriatus*, WAHHAB 777; Post embryonic development of *Eucta kaestneri*, CROME 190; *Heptathela kimurai*, YOSHIKURA 818; *Acarapis woodi*, KLUMPP 412.

Metamorphosis.—Rôle of integument in acarine development, JONES 389.

Life history.—*Amyciaea forticeps* and *Myrmarachne plataleoides*, MATHEW 493; *Latrodectus geometricus*, BAERG 50; *Allodermanyssus sanguineus*, FULLER 274a; *Amblyomma nuttalli*, DIAS 211; *Bryobia praetiosa*, MATHYS 494; *Eylais waikawai*, STOUT 701; *Geckobiella texana*, GOODWIN 292; *Hydrachne marauiensis* and *Piona novae-zealandiae*, STOUT 702; *Hydrovolzia gerhardi*, MITCHELL 510; *Myrmonyssus phalaenodectes*, TREAT 735; *Neotrombidium barringtonense*, SOUTHCOTT 689; *Paratetranychus ilicis*, CALZA & SAUER 135; *Paratetranychus pilosus*, MILLER 504; *Tetranychus bimaculatus*, WILLIAMS 797; *Tetranychus desertorum* and *T. bimaculatus*, IGLINSKY & RAINWATER 369; *Tetranychus pacificus* and *Tetranychus mcDanieli*, NEWCOMER 538; *Typhlodromus fallacis*, BALLARD 58.

Growth.—Arach., LAWRENCE 446.

Moult.—Arach., LAWRENCE 446.

EVOLUTION AND GENETICS

Phylogeny.—Pycnogonida, HEDGPETH 324.

Dimorphism.—Secondary sexual characters in the Oribates, GRANDJEAN 301.

Mimicry.—*Amyciaea forticeps* and *Myrmarachne plataleoides*, MATHEW 493.

Chromosome studies.—*Rhipicephalus sanguineus* and *Hyalomma aegyptium*, DUTT 233.

ECOLOGY AND HABITS

Ecology.—Arthrop. in Southern Michigan, HAIRSTON & BYERS 314; Aran. of maritime drift lines, N. Carolina, BARNES & BARNES 62; Arach. of grassland and deciduous shrub savanna in Nebraska, FICHTER 258; Aran. of pine forests in Poland, LUCZAK 471; Beach zone, Lake Maggiore, BATOR & SCHMOELZER 64; *Latrodectus mactans* and *L. geometricus*, LEWIS 459; *Myrmonyssus phalaenodectes*, TREAT 735; *Eriophyes coriligarum*, CASALS 142; *Tenuipalpus orchidarum*, DOSSE 224; *Trombicula lipovskyana*, PENNER ET AL. 567; *Hydrovolzia gerhardi*, MITCHELL 510; *Dermacentor marginatus*, BOZHENKO & SHEVCHENKO 108; Tardig., MIHELICIC 502.

Ecological Associations.—Oribatids of *Sphagnum*, TARRAS-WAHLBERG 717; *Dendrolaelaps adalaidae* and *D. concinna* from frass of bark-boring beetles, WOMERSLEY 805; *Hemitarsonemus peregrinus* off orange leaves; *Rhyncho-tarsonemus niger* off *Quercus lobata* and off *Hydrangea quercifolia*; *Steneotarsonemus hyaleos* off salt-marsh grass; *Steneotarsonemus fulgens* off *Salix* sp.; *Tarsonemus dispar* off *Populus dissectus*; *T. pritchardi* off *Spathiphyllum*; *T. sulcatus* off hisbiscus, BEER 67; *Kampimodromus australicus* under *Lecanium* scale on *Euonymus*; *Typhlodromus bellinus* off strawberry plants; *Typhlodromus nesbitti* off tree lucerne; *Typhlodromus victoriensis* off citrus, WOMERSLEY 804; *Liponyssus galagus* from nests of *Galago senegalensis*; *Liponyssus rose-innesi* from nest of *Rhabdomys pumilio*, ZUMPT & TILL 829; *Typhlodromus californicus* and *T. mungeri* off lemon fruit, MCGREGOR 479; *Typhlodromus conspicuus*, *T. fin-*

landicus, *T. longipilus*, *T. similis* on citrus and Avocado trees, FLESCNER & RICKER 264; *Paratetranychus pratensis* on sorghum, GRIFFITH & WENE 308; Gamasid parasites and nest inhabitants of *Arvicola terrestris* in Russia, BREGETOVA & KOLPAKOVA 113; *Bryobia* and *Petrobia* invading human dwellings, EYNDHOVEN 251; *Tyroglyphus lintneri* in fungus cultures, JONES & LOHRMAN 390; *Tyroglyphus vjatshensis* in nest of *Lasius niger niger* and *Tyroglyphus vjatsheslavi* in nest of *Formica rufa rufa*, SOROKIN 687; *Dermatophagoides africanus* on fish meal, HUGHES 363; *Zwiczia gibsoni* in pitchers of *Sarracenia purpurea*, NESBITT 535; *Ornithodoros erraticus* in burrows of ant-chat, *Myrmecocichla* sp., HEISCH 329; Acari from nest of *Motacilla f. flava*, TURK in BLAIR & PARSONS 92.

Ecological associations.—Cavernicolous.—Opil., Aran., Acari, BALUZUC ET AL. 60; Opil., Aran., Acari of Yugoslavia, REMY 604; *Parasitus vertacomiensis* and *Typhlothrombium aelleni*, COOREMAN 179; Acar. of Hungarian caves, WILLMANN 799.

Distribution.—Pantop. in the Gulf of Mexico, HEDGPETH 326; Scorp. in Morocco, MALHOMME 483; *Latrodectus mactans* in U.S.A., KASTON 400; Major groups of Trombiculids, AUDY 41; Principles in geographical distribution of feather-mites, DUBININ 230; *Bdellonyssus bacoti*, *Laelaps echidninus*, *Laelaps nuttalli* and *Haemolaelaps glasgowi* in United States, PRATT & GOOD 582; Ixod. in Belgian Congo, Ruanda Urundi, Angola and Northern Rhodesia, THEILER & ROBINSON 725; *Ixodes holocyclus* in Victoria, ROBERTS 615; *Ornithodoros erraticus*, HOOGSTRAAL ET AL. 359; Hydrach. in Pyrenees, ANGELIER 24; *Echiniscoides sigismundi*, CRISP & HOBART 188.

Dispersal.—Spreading of *Ixodes persulcatus*, LUTTA & SHULMAN 476.

Population studies.—Acari of the soil, MURPHY 530; *Trombicula akamushi*, SUZUKI 709; *Ixodes ricinus*, LACHMAJEROWA 425; Hydrach. of Mazurian lakes, Poland, LAZOWSKA 447.

Enemies and defence.—Arach., LAWRENCE 446; *Nemastoma quadripunctatum*, IMMEL 373; Swifts preying on spiders, OWEN & LE GROS 549; *Pepsis*

marginata paralyses *Cyrtopholis portoricae*, PETRUNKEVITCH 572; *Argiope bruennichi* attacked by *Tromatobia ornata* [Hym.], VANDEN EECKHOUDT 757; *Therodiplosis persicae* [Cecidomiid] predaceous on *Tetranychus*, ROBERTI 614; *Eriophyes coryligallarum*, CASALS 142; *Thea bisoctonotata* [Coccinellidae] predaceous on mites on *Dalbergia sissoo* and *Morus alba*, QADRI 586; *Hunterellus hookeri* in *Rhipicephalus sanguineus*, PHILIP 576; *Ixodiphagus hirtus* (Hym.) parasitising ticks, NIKOL'SKAYA 541.

Symbiosis.—Acari associated with bees in Australia, RAYMENT 597.

Phoresy.—*Lamprochernes nodosus* on *Musca domestica*; *Pselaphochernes scorpioides* on fly, *Muscina stabulans*; *Rhacochelifer maculatus* on *Sterrhia aversata* [Lepid. Geometrid.], VACHON 745; Pseudoscorp. on insects, VACHON 747; *Digamasellus quadrisetus*, *Pseuduropoda polytricha*, *Lastoseius hystrix*, *Histiostoma piceae*, *Tarsonemus gaebleri* with *Ips typographus*, HIRSCHMANN & RÜHM 336.

Parasitism.—Host lists: Rocky Mountain spotted fever vectors in Utah, COFFEY 165; *Ixodes laguri laguri*, EMCHUK 242; *Ornithodoros moubata*, DIAS 212; Hosts of *Haemaphysalis parvata* in Mosambique, DIAS 215; Acari of Muridae in Volga delta, DUBININ 229.

Parasitism.—General: Relative degree of abundance of Trombiculids in Malaya, AUDY & HARRISON 44; Birds as agents in transference of mammalian parasitic Acari, TER-VARTANOV ET AL. 724.

Parasitism: Mammalian hosts [Gamasina].—*Androlaelaps sinuosa* off *Perognathus* sp. [Mamm.], FURMAN 276; *Austrochirus sminthopsis* off pouched-mouse, *Sminthopsis crassicaudata* and *Laelaps* (L.) *sminthopsis* off pouched-mouse, *Sminthopsis leucopus*, WOMERSLEY 806; *Bdellonyssus bacoti* attacking man, LAMB 427; *Bdellonyssus dogieli* off *Dromys nitedula*, BREGETOVA 111; *Haemolaelaps macroventralis* off flying squirrel, *Petaurista leucogenys*, ASANUMA 35; *Haemolaelaps sudanicus* off *Lophuromys aquilus*; *Spinturnix scotophilii* off bat, *Scotophilus murinoflavus*; *Spinturnix walkerae* off bat, *Pipistrellus nanus*, ZUMPT & TILL 828; *Haemogamasus citelli* off *Citellus pygmaeus*, BREGETOVA & NELZINA 114; *Haemogamasus eloffi* off *Cryptomys bigalkeri*:

H. hystrici off *Hystrix galeata*; *H. natalensis* off *Cryptomys natalensis*; *Turkiella zuluensis* off bush-baby, *Galago senegalensis braccatus*, ZUMPT & TILL 825; *Hirtoniomyssus bregatovae* and *H. prometheomicus* off *Prometheomys schaposchnikovi*, RAZUMOVA 599; *Laelaps grenieri* off *Lemniscomys striatus* and off *Leggada musculoides*; *Laelaps lavieri* off *Leggada musculoides*; *Laelaps lavoipierrei* off *Lophuromys sikapusi*; *Laelaps roubaudi* off *Dasyomys incomtus*; *Laelaps thamnomys* off *Thamnomys rutilans*, TAUFFLIEB 718; *Laelaps* (*H.*) *manipurensis* off *Rattus r. bullocki*, SINHA 681; *Laelaps muris* and *Laelaps microti* off *Microtus p. pennsylvanicus*; *Ixodes cookei* off *Mephitis mephitis*, *Felis domesticus*, *Castor canadensis*, *Marmota monax*, JUDD 391; *Liponyssus tinae* off *Rhinolophus ferrum equinum*, LOMBARDINI 467; *Neiochironyssus* (*H.*) *matogrosso* off rat, *Cercomys cunicularius forsteri*; *Neoliponyssus myrmecophagus* off anteater, *Myrmecophaga t. tridactyla*, FONSECA 267; *Pneumonyssus bakeri* off *Tamiasciurus douglasii mollipilosus*, FURMAN 275; *Pneumonyssus mossambicus* from baboon, *Papio ursinus*; *Pneumonyssus santos-diasi* from *Cercopithecus aethiops* and *Papio ursinus*, ZUMPT & BEDFORD 827; *Pneumonyssus simicola* in monkeys, INNES ET AL. 375; *Steatonyssus eos* off *Pipistrellus nanus*, ZUMPT & TILL 826; Halarachnids from sea mammals of west coast of North America, MARGOLIS 489.

Parasitism.—Mammalian hosts: [*Acomatacarus*] *Acomatacarus bakeri* off *Peromyscus truei* gratus; *Whartonia whartoni* off *Basomys musculus musculus*, HOFFMANN 349; *Acomatacarus brevicar* off *Perognathus californicus*; *Acomatacarus linsdalei* off *Perognathus californicus*, off *Perognathus parvus*, off *Perognathus formosus*, off *Citellus beecheyi*; *Euschöngastia enemi* off *Perognathus californicus*; *Euschöngastia nihi* off *Citellus beecheyi*, off *Perognathus californicus*; *Euschöngastia pomerantzi* off *Peromyscus maniculatus*, off *Peromyscus truei*, off *Peromyscus californicus*, off *Peromyscus boylii*, off *Citellus beecheyi*, off *Microtus californicus*, off *Perognathus californicus*, off *Neotoma fuscipes*, off *Mus musculus*; *Euschöngastia radfordi* off *Peromyscus californicus*, off *Peromyscus boylii*, off *Peromyscus maniculatus*, off *Peromyscus*

truei, off *Perognathus californicus*, off *Dipodomys venustus*, off *Microtus californicus*, off *Neotoma fuscipes*, off *Reithrodontomys megalotis*, off *Thomomys bottae*, off *Mus musculus*, off *Citellus beecheyi*, off *Sylvilagus bachmani*, off *Sylvilagus auduboni*, off *Zonotrichia coronata*, off *Zonotrichia leucophrys*, off *Lophortyx californica*, off *Oreortyx picta*, off *Junco oreganus*, off *Parus inornatus*, off *Carpodacus purpureus*, off *Tamiasciurus douglasii*, off *Eutamias townsendi*, off *Citellus lateralis*, off *Clethrionomys californicus*, off *Neurotrichus gibbsii*, off *Odocoileus hemionus*, off *Perognathus parvus*, off *Ochotona princeps*, off *Sciurus griseus*, off *Marmota flaviventris*, off *Lepus californicus*, off *Melospiza melodia*, off *Toxostoma redivivum*; *Euschöngastia romola* off *Perognathus californicus*, off *Dipodomys venustus*, off *Citellus beecheyi*; *Trombicula imperfecta* off *Perognathus flavus*, off *Perognathus californicus*, off *Peromyscus maniculatus*, BRENNAN & JONES 115; *Acomatacarus yosanoi*, *Euschöngastia kitajimai*, *Trombicula* (*L.*) *kawamurai* off *Rattus rattus* spp., FUKUZUMI & OBATA 274.

Parasitism.—Mammalian hosts: [*Euschöngastia*] *Euschöngastia cynomyicola* off *Cynomys ludovicianus*, off *Perognathus hispidus*, off *Citellus tridecemlineatus*; *E. lodomi* off *Sylvilagus floridanus*, off *Perognathus flavus*, off *Dipodomys ordi*, off *Neotoma micropus*, off *Peromyscus leucopus*, off *Peromyscus maniculatus*, CROSSLEY & LIPOVSKY 193; *Euschöngastia paradoxa* off *Pelomys fallax*, off *Dasyomys bentleyae*, off *Oenomys hypoxanthus*, off *Otomys irrorationis*, off *Thamnomys dryas*, off *Arvicanthus abyssinicus*, off *Lemniscomys striatus*, off *Leggada birungensis*, off *Lophuromys aquilis*, off *Rattus r. frugivorus*, off *Lemniscomys griselda*, off *Dendromus pumilio*, off *Claviglis* sp., off *Crociodura* sp.; *Euschöngastia paradoxa* var. *gilleti* off *Pelomys fallax* and off *Oenomys hypoxanthus*; *Euschöngastia paradoxa nana* off *Oenomys hypoxanthus* and off *Lemniscomys striatus*, JADIN ET AL. 379; *Euschöngastia indicella* off rat (*Chiropodomys legatus*; *Euschöngastia ocellifera* off rat (*Chiropodomys legatus*); *Euschöngastia daria* off *Tupaia montana baluensis* and *Tupaia m. minor*, off *Nannosciurus whiteheadi* and *Rattus whiteheadi*; *Euschöngastia roluis* off rat

(*Chirodomys legatus*); *Euschöngastia* (W.) *asanluca* off *Tupaia tana*; *Euschöngastia* (W.) *calunosa* off *Rattus r. baluensis*, TRAUB & AUDY 732; *Euschöngastia popei* off *Rattus assimilis*; *Trombicula antechinus* off marsupial mouse, *Antechinus flavipes*; *Trombicula thylogale* off wallaby, *Thylogale wilcoxi*, WOMERSLEY 811; *Euschöngastia laurenti* off *Dasymys bentleyae*; *Euschöngastia thomasi* off *Claviglis* sp., off *Arvicanthus abyssinicus*, off *Dasymys bentleyae* and off *Lemniscomys striatus massaicus*; *Schöngastia radfordi* off *Arvicanthus abyssinicus* and off *Dasymys bentleyae*, JADIN & VERCAMMEN-GRANDJEAN 377; *Euschöngastia penetrans* off *Otomys irroratus* and off *Dasymys bentleyae*; *Euschöngastia pirloiti* off *Lophuromys aquilus* and off *Tachyoryctes ruandae*, JADIN & VERCAMMEN-GRANDJEAN 380; *Euschöngastia costulata* on *Microtus*, BERNARD 82; *Euschöngastia costulata* off *Microtus arvalis* and *M. agrestis*, COOREMAN 178; *Euschöngastia jonesi* off white-footed mouse, *Peromyscus leucopus*, LIPOVSKY & LOOMIS 464; *Euschöngastia koreaensis* off *Rattus rattus*, JAMESON & TOSHIOKA 381.

Parasitism. — Mammalian hosts:

[*Trombicula*]: *Trombicula arenicola* off *Dipodomys ordi*, off *D. microps*, off *Citellus richardsoni*, off *Mus musculus*, off *Perognathus flavus*, off *P. hispidus*, off *P. parvus*, off *Neotoma albigula*, off *Muscivora forficata*; *Trombicula crossleyi* off *Melanerpes erythrocephalus*, off *Peromyscus leucopus*, off *P. maniculatus*; *Trombicula fitchi* off *Myotis velifer*, off *Sciurus carolinensis*, off *S. niger*, off *Elaphe obsoleta*, off *Neotoma micropus*, off *Glaucomys volans*; *Trombicula kardosi* off *Sciurus niger*, off *Elaphe obsoleta*, off *Eutamias umbrinus*; *Trombicula* (E.) *hoplai* off *Cynomys ludovicianus*, off *Neotoma lepida*, off *N. mexicana*, off *N. micropus*, off *Peromyscus leucopus*, off *Citellus tridecemlineatus*; *Trombicula tweitei* off *Antrozous bankeri*, LOOMIS 468; *Trombicula* (T.) *azteca* off *Sorex saussurei* and *Peromyscus hylocetes*; T. (T.) *boneti* off *Mormops megalophylla* (?), HOFFMANN 351; *Trombicula* (M.) *esoensis* off *Clethionomys rufocanus bedfordiae*, SASA & OGATA 647; *Trombicula* (N.) *finleyi* off *Neotoma cinerea orolestes*; T. (N.) *loomis* off *Reithrodontomys megalotis* and off *Mus musculus*, KARDOS 399;

Trombicula flagellifera off shrew (*Crociodura* sp.) also off squirrel (*Nannosciurus whiteheadi*); off shrew (*Hylomys suillus*); *Trombicula tuhana* off squirrel *Nannosciurus whiteheadi*; *Trombicula* (L.) *baluensis* off shrew (*Crociodura* sp.) also off shrew (*Hylomys suillus*); off squirrel (*Dremomys everetti* and *Rattus* sp.); *Trombicula* (L.) *micula* off squirrel (*Nannosciurus melanotis*); also off *Callosciurus notatus*; *Trombicula* (L.) *pilatta* off *Rattus r. baluensis*; also off shrew (*Tupaia montana*) and *Dendrogale* sp.; *Trombicula* (L.) *pipellae* off civet (*Prionodon linsoni gracilis*); also off *Callosciurus notatus*, off ferret-badger (*Helictis everetti*), off *Rattus alticola*, off *Rattus mülleri* and moon-rat (*Echinosorex gymnaurus*); *Trombicula* (L.) *tarsala* off *Rattus mülleri*, TRAUB & AUDY 781; *Trombicula koomori* off *Rhinolophus ferrum-equinum* and T. (L.) *toshiokai* off *Myotis macrodactylus*, SASA & JAMESON 646; *Trombicula merrihevi* off bat, *Tadarida mexicana* and *Trombicula ornata* off rat, *Neotoma micropus*, LOOMIS & LIPOVSKY 469; *Trombicula mouni* off bat, *Nycteris capensis damarensis*, RADFORD 590; *Trombicula potosina* off *Neotoma micropus*, HOFFMANN 348; *Trombicula quasigiroudi* off *Dasymys bentleyae*, JADIN & VERCAMMEN-GRANDJEAN 377; *Trombicula* (L.) *subintermedia* off *Apodemus agrarius*, JAMESON & TOSHIOKA 381; *Trombicula thomsoni* off bats, *Chalinolobus gouldi*, WOMERSLEY 803.

Parasitism. — Mammalian hosts [Other Trombiculids]: *Ascoschöngastia anomala* off *Peromyscus truei gratus* and *Sorex saussurei*; *A. pedregalensis* off *Baiomys taylori* analogus, *Peromyscus truei gratus* and *Sorex saussurei*, HOFFMANN 350; *Ascoschöngastia monteli* on *Mus decumanus*, ANDRÉ 19; *Brennanella longispina*, *Trombicula brevitarsa*, *Trombicula filamentosa*, *Trombicula knighti* off *Rhinolophus vivosus acrotis*; *Trombicula hoogstraali* and *Neotrombicula saperoi* off *Rattus r. rattus*; *Haemolaelaps namruvi* and *Neoschöngastia yemensis* off *Meriones rex buryi*, RADFORD 589; *Fainiella womersleyi* var. *acutalis* off *Dendrohyrax arboreus adolfi-friedericci*, JADIN ET AL. 378; *Gahrlepiea* (S.) *arona* off *Rattus mülleri* and *R. whiteheadi*; *Gahrlepiea* (S.) *birella* off *Rattus bowersi*; *Gahrlepiea* (S.) *erula* off *Rattus r. sladeni*, also *Rattus flavipectus yunnanensis* and

Rattus f. fulvescens; *Gahrlepiea* (S.) *gammonsi* off *Anourosorex squamipes assamensis*; *Gahrlepiea* (S.) *helata* off *Crocidura* sp.; *Gahrlepiea* (S.) *kalrata* off *Rattus rattoides* sp.; *Gahrlepiea* (S.) *liota* off *Suncus caeruleus fulvocinereus* also off *Anourosorex squamipes assamensis* and off *Crocidura* sp., TRAUB & EVANS 733; *Leeuwenhoekia* (A.) *hirsti* on man, DERRICK & WOMERSLEY 208; *Mehracula roonwali* off tree shrew, *Tupaia belangeri*; *M. radfordi* and *Trombiculindus pruthi* off crab-eating mongoose, *Herpestes urva* and squirrel, *Dremomys macmillani*; *Walchia manipurensis* off *Bandicoota bengalensis bengalensis*, SINHA 679; *Schoutedenichia fulleri* off *Arvicanthus abyssinicus*, JADIN & VERCAMMEN-GRANDJEAN 377.

Parasitism.—Mammalian hosts: DEMODECIDAE: *Demodex bovis* on cattle, FREIRE & DIAS 271; *Demodex bovis* on cattle, ROCHA & PARDI 620; *Demodex folliculorum*, BRECKENRIDGE 109; *Demodex folliculorum*, NICHOLAS 540; *Demodex* on man, MISKJIAN 508; *Demodex* on mink, WALKER 778.

Parasitism.—Mammalian hosts: IXODOIDEA: *Amblyomma beaurepairoi* off *Tatus noveicinctum* [Edent.: Mamm.]; *Amblyomma calcaratum venezuelense* off *Tamandua tetradactyla* [hairy anteater], VOGELSANG & DIAS 772; *Amblyomma nuttalli* off turtles, *Geochelone pardalis*, *Kinixys belliana zuluensis* and *Pelusios sinuatus sinuatus*, DIAS 211; *Anocentor nitens* on jaguar, *Panthera onca*, ARAGÃO & FONSECA 32; *Haemaphysalis bispinosa* on *Oryctolagus cuniculus* [rabbit], BULL 127; *Haemaphysalis muhsami* off *Helogale p. parvula*, DIAS 218; *Haemaphysalis zambeziæ* off *Oreotragus o. oreotragus*, DIAS 216; *Ixodes* of Muroidea in Japan, ASANUMA & SEKIKAWA 36; *Ornithodoros rostratus* biting pigs, PARDI & ROCHA 558; *Rhipicephalus hurti* off buffalo, WILSON 801.

Parasitism. — Mammalian hosts: *Austromyobia schoutedeni* off gerbille, *Tatera brantsi*, LAWRENCE 440; *Boydaiia derricki* off *Rattus assimilis*, WOMERSLEY 812; *Listrophoroides oryzomyi* and *Listrophorus grassei* off mouse, *Orozomys p. palustris*; *Listrophorus theodori* off gerbil, *Meiones l. libycus*, RADFORD 592; *Marquesania imbricata* off *Lemniscomys griselda*; *Radfordia forcipifer* off

Tatera brantsi, LAWRENCE 443; *Noctodres cati* in bobcat, *Lynx rufus*, PENNER & PARKE 568; *Psorergates ovis* on sheep, DAVIS 200.

Parasitism.—Avian hosts: *Haemolaelaps dissimilis* off *Emberiza rustica latifascia*, ASANUMA 35; *Haemolaelaps phoeniculi* off red-billed hoopoe, *Phoeniculus porphyreus*, ZUMPT & TILL 828; *Harpyrhynchus capellæ* off *Capella gallinago*; *H. cylindripalpus* off *Fringilla coelebs*; *H. longipes* off *Troglodytes troglodytes*; *H. monstrosus* off *Garrulus glandarius*; *H. ovalis* off *Passer domesticus*; *H. plumaris* off *Fringilla coelebs*, *Chloris chloris*, *Carduelis cannabina*, *Muscicapa striata* and *Nyroca ferina*; *H. reducta* off *Micropus apus*; *H. tracheatus* off *Buteo buteo*, FRITSCH 268; *Mackiena todai* off *Microscelis a. amaurotic*, off *Troglodytes t. utanoi* and off *Emberiza spodocephala personata*, KAMO 395; *Speleognathopsis galli* off *Gallus gallus*, COOREMAN 177; *Steatonyssus similis* off sparrow weaver, *Plocepasser mahali*, ZUMPT & TILL 826; *Euschöngastia daria* off bird, TRAUB & AUDY 732; *Neoschöngastia asakawai* off *Scolopax r. rusticola* and *Banbusicola t. thoracica*; *Neoschöngastia okumurai* off *Monticola solitarius magnus*, FUKUZUMI & OBATA 274; *Trombicula vorca* off bird, TRAUB & AUDY 731; *Trombiculids* of bird from Japan, SUYEMOTO ET AL. 707; *Knemidokoptes pilæ* on budgerigars and a parakeet, OLDHAM & BERESFORD-JONES 545; *Pegreffia pegreffii* in respiratory tract of swallow, LOMBARDINI 467; *Pterodectes andréi* off *Tchagra senegalus*; *Pterodectes buttikeri* off *Hyphanturgus ocularius*; *Pterodectes rhodesiensis* off *Riparia paludicola*; *Pterodectes sabiensis* off *Prionops plumatus*; *Pterodectes zumpti* off *Lamprocolius corrusca*, TILL 729; *Trouessartia africana* off blue-billed fire finch, *Lagonosticta rubricata*; *Trouessartia carpi* off scrub robin, *Erythorpygia leucophrys*; *Trouessartia transvaalensis* off ant-eating chat, *Myrmecocichla formicivora*, TILL 730; *Ixodes percavatus* off albatross, *Diomedea chlororhynchus* and hermit thrush, *Nesocichla eremita gordonii*, ANASTOS 10; Host list of *Ixodes ricinus* in Czechoslovakia, ROSICKÝ & BALÁT 634; *Ixodes sigalasi* off lapwing, *Vannellus vanellus* and *Turdus* sp., LAMONTELLERIE 428; *Ixodes (C.) uriae* on penguins and sea birds, HOOGSTRAAL 355; *Ixod.* on birds, THOMPSON 728.

Parasitism.—**Reptilian and Amphibian hosts:** *Acomatacarus arabicus* off gecko, *Stenodactylus pulcher*; *Endotrombicula bufonica* off *Bufo orientalis*, RADFORD 589; *Babiangia bulbifera* off *Lygosoma* (H.) *forbesii* [Lizard], SOUTH-COTT 690; *Boyardia angelae* on frog, *Limnodynastes tasmaniensis*, WOMERSLEY 810; *Geckobiella texana* on lizard (*Sceloporus u. undulatus*, GOODWIN 292; *Indogynium lindbergi* off *Platyplectrurus madurensis*, off *Uropeltis pulnejensis* and off *Terebrurus rhodogaster*, SELLNICK 669; *Pterygosoma texana* on lizard, LANE 431; *Trombicula nativitatis* off lizard, *Uta concinna*, HOFFMANN 348.

Parasitism.—**Invertebrate hosts:** *Atacellides schubarti* in mussel, *Diplodon delodontus expansus* and other Hydrach. in Mollusca, VIETS & PLATE 767; *Audyana thompsoni* off *Heterometrus longimanus* [Scorpion]; *Cockingsia tenuipes* off giant longicorn beetle; *Grossia onychia* off *Chyzeria australiense* [Trombidid]; *Mackerrasiella globus* off *Dolichopodid* flies, WOMERSLEY 808; *Histiostoma laboratorum* on *Drosophila* flies, PEERON 569; *Myialges* on *Trinoton* sp. [Anopl.], EICHLER 240; *Myrmonyssus phalaenodectes* off *Pseudaletia unipuncta* and other moths, TREAT 735; *Partnunia* larva on stone flies, Plecoptera, MUENCHBERG 524; List of Hydrach. with their Culicidae (Dipt.) hosts, MÜNCHBERG 525.

Parasitism: **Plant hosts:** **TETRAYCHIDAE:** *Eutetranychus monodi* off *Cassia siamea* and *Grewia mollis*, ANDRÉ 14; *Paratetranychus hondoensis* off cedar (*Cryptomeria japonica*); *Paratetranychus inoue* off ezo-spruce (*Picea jezoensis*) and todo-fir (*Abies Mayriana*), EHARA 239; *Paratetranychus ilicis* on coffee, CALZA & SAUER 135; *Paratetranychus mcgregori* off cotton, other Tetranychids off cotton, BAKER & PRITCHARD 56; *Schizotetranychus smirnovi* off *Prunus armeniaca*; *S. texor* off *Eleagnus angustifolia*; *S. latifrons* off *Rosa* sp., VAINSTEIN 755; *Tetranychus cocosinus* off *Celtis* and *Rubus*; *T. magnoliae* off *Magnolia grandiflora* and *Liriodendron tulipifera*; *T. merganser* off *Ligustrum vulgare*, BOUDREAU 102.

Parasitism.—**Plant hosts:** **ERIOPHYTIDAE:** *Acaphylla indiae* off *Thea sinensis*; *Baileyna marianae* off *Premna* sp.; "Cecidophyes" *hendersoni* off *Yucca*

glauca; *Phyllocoptes didelphis* off *Populus tremuloides*; *Phytoptus garryana* off *Garrya elliptica*; *Phytoptus montanus* off *Carex subfusca*; *Phytoptus yuccae* off *Yucca glauca*; *Platyphytoptus eldoraensis* off *Pinus ponderosa*; *Vasates dormitor* off *Populus tremuloides*, KEIFER 405; *Aceria acnistii* off *Acnistus cauliflorus*; *Calepitrimerus occitujae* off *Thuja occidentalis*; *Calepitrimerus gilsoni* off *Vaccinium ovatum*; *Eupitrimerus zauschneriae* off *Zauschneria californica*; *Floracarus calonyctionis* off *Calonyction aculeatum*; *Glytacus lithocarpi* off *Lithocarpus densiflora*; *Nalepella tsugifoliae* off *Tsuga canadensis*; *Oxypleurites acervagrans* off *Acer macrophyllum*; *Phyllocoptes arceuthi* off *Juniperus occidentalis*; *Platyphytoptus monophyllae* off *Pinus monophylla*; *Vasates populivagrans* off *Populus fremontii*; *Vasates pritchardi* off *Ceanothus cuneatus*, KEIFER 404; *Aceria allenrolfeae* off *Allenrolfea occidentalis*; *Aceria caliberberis* off *Berberis californica*; *Aceria eriodictyonis* off *Eriodictyon crassifolium*; *Aceria paradianthi* off *Dianthus* sp.; *Aceria rosas-costae* off *Acacia cavenia*; *Aceria tradescantiae* off *Tradescantia* sp.; *Paraphytoptus arceuthobii* off *Arceuthobium campylopodium*; *Tetra cercocarpi* off *Cercocarpus ledifolius*, KEIFER 402; *Aceria neobrevi* off *Juglans californica* and *Aceria parthenii* off *Parthenium argentatum*, KEIFER 403; *Aceria sheldoni* on *Citrus limon*, *C. aurantiaca* and *C. sinensis*, MARTINO 490; *Calepitrimerus muesebecki* on *Persea americana*, RICKER & FLESCNER 610; *Eriophyes* on *Prunus scrotina*, O'DELL 544; *Vasates lupini* off *Lupinus alba*, BATCHELOR & BREAKEY 63.

Parasitism.—**Plant hosts:** **General:** Acari of plants in Argentina, VERGANI 762; Acari of fruit trees in Turkey, DÜZGÜNES 235; Acari injurious to Phormium, CUMBER 195; Acari of sugar cane, Box 106.

Parasitism: **Intermediate hosts.**—**Oribatids** hosts of the sheep tapeworm, RAYSKI 598; Oribatids as hosts of *Moniezia*, SHALDIBINA 673; *Schelorbates madrasensis* host of *Moniezia expansa*, ANANTARAMAN 8; *Schelorbates laevigatus* experimental host for *Moniezia expansa*, RAO & CHOQUETTE 595; Experimental infection of *Galumna obrius* and *Schelorbates laevigatus* with *Moniezia* spp., POTEMKINA 581.

Parasitism.—**Pentastomida:** *Armillifer moniliformis* from domestic cat, YUTUC 820; *Gigliolella brumpti* in lemur, CHABAUD & CHOQUET 148; *Linguatula serrata* in *Oryctolagus cuniculus* [wild rabbit], BULL 127; GURR 310; Incidence and life cycle of *Linguatula serrata*, SINCLAIR 678; *Railietiella amphiboluri* in bearded-lizard, *Amphibolurus barbatus*, MAHON 482.

Host selection.—*Metatetranychus ulmi*, MORI 519.

Host specificity.—Acari in Australia, ROBERTS 616.

Season variation.—*Echiniscoides sigismundi*, CRISP & HOBART 188.

Parasitism.—**Transmission of disease:** *Amblyomma americanum* vector of tularemia, CALHOUN 133; *Dermacentor andersoni* vector of paralysis in dogs, O'ROURKE & MURNAGHAN 548; rôle of *Dermacentor marginatus* in tularemia, OLSUFYEV ET AL. 547; *Dermacentor variabilis* vector of Rickettsia rickettsii, GOULD & MIESSE 294; *Hyalomma transiens* vector of sweating sickness, NEITZ 532; *Pasteurella tularensis* isolated from *Ixodes ricinus*, BENDA & GAIBERGER 80; Virus isolated from *Ixodes ricinus*, LACHMAJER & KAWECKI 426; *Ornithodoros lahorensis* reservoir of *Coxiella burnetti*, PAYZIN & AKYAY 566; Spirochaetae by *Ornithodoros papillipes*, PAVLOVSKI & SKRINNİK 565; *Ornithodoros savignyi* potential vector of virus, TAYLOR & HURLBUT 719; *Ornithodoros talaje* infected with relapsing fever spirochetes in Mexico, MAZZOTTI 495; *Ornithodoros* as vector of recurrent fever, SKRIBNIK 682; *Borellia* isolated from *Ornithodoros*, OZSAN & AKYAY 551; *Rhipicephalus sanguineus* vector of Rickettsia, SAMPAIO ET AL. 642; *Rhipicephalus simus senegalensis* transmission of *Coxiella burnetti*, TENDEIRO 720; Ixodidae as vectors of Babesiosis in Russia, LUTTA & KHEISEN 475; Tick-borne relapsing fever in India, KAUL 401.

Experimental transmission of disease.—*Ornithodoros furcosus*, *O. rudis*, *Amblyomma cayennense* experimentally infected with *Trypanosoma cruzi*, LEÓN & CASTILLO DE LEÓN 452; *Borellia duttoni* by *Ornithodoros moubata*, GEIGY ET AL. 285; Experimental infecting of *Ornithodoros moubata* and *O. turicata*, BURGDORFER & PICKENS 128; Relapsing

fevers by *Ornithodoros* spp., DAVIS 198.

Arach. of medical importance.—*Latrodectus mactans*, ticks and mites, ALLINGTON & ALLINGTON 7; ROY & BROWN 637; MACKIE ET AL. 480.

Acari of medical importance.—BEK-LEMENSHEVA 78; BISHOPP & PHILIP 91; BROWN 118; Tyroglyphids in respiratory tract of man, ANDRÉ 23; Pulmonary acariasis in man (*Carpoglyphus* sp.), TABOADA 713; Air-borne mites and respiratory syndrome, SOYSA 691; *Pyemotes ventricosus* causing grain itch, BOOTH & JONES 99; Tetranychids causing skin irritation to man, DERRICK 207; Paralysis from bite of *Dermacentor variabilis*, HEIDT 327; Ixod. of the Near East, HOOGSTRAAL 354; Ticks of Russia, PETRISHTCHEVA 571.

Arach. of veterinary importance.—ROY & BROWN 637.

Technique.—Collecting and preserving Pseudoscorp., EVANS & BROWNING 249; Laboratory breeding of *Bdellonyssus bacoti*, ZEMSKAYA 322; Collecting spider mites, BOUDREAUX 101; Culture of Oribatids, SENGBUSCH 671; Rearing *Tetranychus bimaculatus*, WILLIAMS 797; Rearing Trombiculids, AUDY & NADCHATRAM 45; Collecting *Trombicula lipovskiyana*, PENNER ET AL. 567; Flag for tick collecting, HOREN 361.

General habits.—*Palamnaeus bengalensis*, KANUNGO 397; *Amycinae forticeps* and *Myrmarachne plataleoides*, MATHEW 493; Aran., CHRYSANTHUS 156; *Aceria tulipae*, KANTACK & KNUTSON 396; *Psorergates ovis*, DAVIS 200; *Saccodomus formivorus*, SMITH 684; *Tetranychus desertorum*, IGLINSKY & RAINWATER 369; *Trombicula autumnalis*, ANON. 2; *Vasates lycopersici*, ANDERSON 12; *Amblyomma nuttalli*, DIAS 211.

Feeding habits.—[excl. Acari] *Centruroides insulans*, BAERG 51; Scorp., BAERG 53; *Dactylochelifer latreillei* feeding on larva of *Helicomyia saliciperda* (Cecidomyiidae), KURER 423; Pseudoscorp. and spiders natural enemies of *Oliarus atkinsoni* (Hemiptera), CUMBER 194; *Nemastoma quadrupunctatum*, IMMEL 373; *Celaenia excavata*, SPILLANE 693; Fishing net of *Dinopsis subrufus*, ROBERTS 619; Arach., LAWRENCE 446.

Feeding habits.—[Acari]: Feeding times of Trombiculid larvae, HARRISON

320; Trombiculids, LIPOVSKY 463; Feeding of Trombid. larvae on arthropods, WHARTON 791; Predaceous Laelaptidae, HANTSBARGER & O'NEILL 318; *Mediolata* sp. feeding on *Calepitrimerus muesebecki*, RICKER & FLESCHNER 610; *Saccodomus formivorus*, SMITH 684; *Typhlodromus fallacis* feeding on *Tetranychus bimaculatus*, BALLARD 58; *Tyrophagus longior*, BRENY & CHODJAI 116; Attachment and feeding rate of mites on living hosts, CROSS & WHARTON 192; *Ixodes persulcatus*, BALASHOV 57; Ixod. on rabbits, PAVLOVSKI ET AL. 564.

Breeding habits.—Scorp., BAERG 53; Aran., TRETZEL 737.

Sex relations.—*Amyciaea forticeps* and *Myrmarachne platyleoides*, MATHEW 493.

Courtship.—*Centruroides insulans*, BAERG 51; *Amyciaea forticeps* and *Myrmarachne platyleoides*, MATHEW 493; Aran., BUZZARD 130.

Oviposition.—*Tetranychus bimaculatus*, WILLIAMS 797.

Web construction.—*Aranea sexpunctata*, BUZZARD 131, 132; *Eucta kaestneri*, CROME 190; *Miranda aurantia*, SPENCER 692; Orb-weavers, PETERS 570.

Accidental importation.—*Torania* spp. imported in Great Britain, BROWNING 120; Imported spiders into Germany, CROME 189; Spiders imported into Germany, SCHMIDT 657; *Phonetrutia* sp. imported into Brazil, WITKIND 802.

Behaviour.—*Heterometrus longimanus*, HARRISON 319; *Palamnaeus bengalensis* in captivity, KANUNGO 397; Massing of Opiliones to avoid desiccation, WAGNER 776; *Cyrtopholis portoricae*, PETRUNKEVITCH 572; *Misumena calycina* on orchid, ARZT 34; *Bdellonyssus bursa*, *B. sylvianum* and *Dermanyssus gallinae*, SIKES & CHAMBERLAIN 677; Feeding tests with blood-sucking mites, CROSS 191.

Economics.—Repellents: For tick, SMITH ET AL. 683.

Economics. — Treatment: *Demodex canis*, SCHILLER ET AL. 656.

Economics.—Control: TETRANYCHIDAE: *Metatetranychus ulmi*, DOWNING 226; *Paratetranychus pilosus* and *Tetranychus urticae*, HOPP 360; *Tetrany-*

chus bimaculatus and *T. desertorum*, YOUNG & GAINES 819; *Tetranychus bicoricae*, KING 409; *Tetranychus telarius*, VRYDAGH & COOREMAN 775; Tetranychidae, KLOSTERMEYER 411; Red spider, CRANHAM ET AL. 187; Red spiders, DOSSE 223; Spider mites, HARVEY 321; Red spider, AGRIC. RES. COUNC. 6; Red spider, PRITCHARD 584, 585; Red spider, SCHÄFER 650.

Economics.—Control: IXODOIDEA: *Amblyomma americanum*, THERRIEN ET AL. 727; *Argas persicus*, EDGAR ET AL. 237; *Argas persicus*, MENON ET AL. 499; *Boophilus microplus*, HITCHCOCK 337; *Boophilus microplus*, LEGG 450; *Boophilus microplus*, RIEK 612; *Dermacentor variabilis*, COLLINS & NARDY 168; *Dermacentor* and *Ixodes*, BLEDNIKH ET AL. 93; Ixod., ARTHUR 33; Ticks in Uganda, CLIFFORD 160.

Economics.—Control: Other Acari: *Acarapis woodi*, SACHS 640; *Eriophyes pyri*, DOWNING 225; *Eriophyes pyri*, LANCHESTER 429; *Myobia musculinus* and *Myocoptes musculinus*, MADDEN ET AL. 481; *Sarcoptes scabiei* var. *cuniculi*, MELIS & BECCARI 497; *Sarcoptes suis*, ROBERTS & ROGOFF 618; *Trombicula akamushi*, SUZUKI 709; Trombiculids of small mammals from Japan, SUYEMOTO ET AL. 707; *Tyrophagus lintneri*, BROWN ET AL. 119; *Vasates cornutus*, ANTHON 30; *Vasates lycopersici*, ANDERSON 12; Acari on citrus, BOYCE 107.

DISTRIBUTION

PALAEARCTIC REGION

Iceland.—Opil., Aran., Acari, HYATT 368.

Great Britain.—Pantop., Acari, Tardig., NEWELL 539; Pseudoscorp., Aran., CLOUDSLEY-THOMPSON 163; Pseudoscorp., EVANS & BROWNING 249; Opil. Aran., WHATMOUGH 793; Aran., ASSIS-FONSECA & COWLEY 40; Aran., BROWNING 120; Aran., COOKE 175; Aran., DUFFEY ET AL. 231; Aran., DUFFEY & MILLIDGE 232; Aran., MILLIDGE 505; MURGATROYD 527, 528, 529; Aran., OWEN & LE GROS 549; Aran., ROY 636; Aran., WOOD 813; Acari, EVANS 247; Acari, GILMOUR 288; Acari, GREEN 305; Ixod., HOBART & WHALLEY 338; Acari, MORTON 523; Ixod., THOMPSON 728; Acari, TURK IN BLAIR & PARSONS 92; Pentast., SINCLAIR 678; Tardig., CRISP & HOBART 183.

France.—Scorp. Aran., RASMONT 596; Pseudoscorp., BEIER 71; Opil., Aran., Acari, BALUZUC ET AL. 60; Opil., DRESKO 227; Aran., DENIS 203, 204; Acari, ANDRÉ 20, 22; Acar., COOREMAN 179, 181, 182; Acari, FRANZ 269; Acari, GRANDJEAN 303; Acari, THÉODORIDÉS 726; Ixod., LAMONTELLERIE 428; Hydrach., LUNDBLAD 474.

Belgium.—Aran., DUVIGNEAUD 234; Acari, COOREMAN 178; Acari, GALOUX 283.

Holland.—Aran., CHRYSANTHUS 155, 156, 157; Acari, EYNDHOVEN 250, 251; Acari, NESBITT 536; Hydrach., BESSE-LING 84, 85.

Sweden.—Acari, GRANDJEAN 302; Acari, TARRAS-WAHLBERG 717.

Finland.—Aran., HACKMAN 313.

Karelo-Finnish Rep.—Ixod., LUTTA & SHULMAN 476.

Portugal.—Acar., CAMIN 136; Hydrach., LUNDBLAD 474.

Spain.—Opil., ROEWER 624; Acari, FRANZ 269; Halacar., ANGELIER 25; Hydrach., LUNDBLAD 474.

Italy.—Scorp., Pseudoscorp., Opil., Aran., CAPORACCIO 138; Pseudoscorp., BEIER 72; Aran., CAPORACCIO & DENIS 140; Acari, LOMBARDINI 467; Acar., MARTINO 490; Acari, MONASTERO 516; Acari, STARKOFF 696; Acari, VALLE 756; Halacar., ANGELIER 25; Tardig., BEETOLANI 83; Tardig., PAPI 557; Tardig., TAPPI 716.

Switzerland.—Pseudoscorp., VACHON 746; Opil., Aran., BATOR & SCHMOELZER 64; Aran., COMELLINI 169; Acar., COOREMAN 179; Hydrach., MESSIKOMMER 500.

Austria.—Aran., WIEHLE & FRANZ 794; Acari, FRANZ 270; Acari, KEPKA 406; Acari, MIHELČIČ 501, 503; Acari, WILLMANN 799, 800; Hydrach., LÁSKA 435; Hydrach., SZALAY 710.

Germany.—Pseudoscorp., Opil. & Acar., WEIDNER 786; Opil., Aran., WEIDNER 787; Aran., JACOBI 376; Aran., KNÜLLE 413, 418; Acari, JANKE 382; Acari, KNÜLLE 416, 417; Acari, NOLL & STAMMER 543; Acari, STRENZKE 704, 705; Hydrach., LÁSKA 435, 436; Hydrach., VIETS 769; Hydrach., VIETS & VIETS 768.

Poland.—Aran., LUCZAK 471; Hydrach., LAZOWSKA 447.

Hungary.—Hydrach., SZALAY 711, 712.

Yugoslavia.—Opil., Aran., Acari, REMY 604; Acari, OŽEGOVIĆ 550; Hydrach., KARAMAN 398.

Macedonia.—Ixod., ANGELOVSKI 28.

Czechoslovakia.—Hydrach., LÁSKA 434, 435, 437, 438; Ixod., DANIEL & LUDVIK 196, 197; Ixod., ROSICKÝ 633; Ixod., ROSICKÝ & BALÁT 634.

Rumania.—Acari, FEIDER 255.

Russia.—Aran., KHARITONOV 407; Acari, BREGETOVA 112; Acari, BREGETOVA & KOLPAKOVA 113; Acari, DUBININ 229; Acari, LANGE 433; RAZUMOVA 599; Acari, SOROKIN 687; Acari, VOLGIN 774; Ixod., BOZHENKO & SHEUCHENKO 108; Ixod., EMCHUK 242; Ixod., FILIPPOVA 260, 261.

Balearic Is.—Aran., Acari, JOLIVET 388.

Corsica.—Hydrach., ANGELIER 26, 27; Hydrach., VIETS 766.

Sardinia.—Acari, LOMBARDINI 467.

Algeria.—Scorp., BÜCHERL 124; Aran., DENIS 205; Acari, STRENZKE 706; Halacar., ANGELIER 25; Halacarid., DELAMARE DEBOUTTEVILLE 202.

Mauritania.—Pseudoscorp., VACHON 744.

Morocco.—Scorp., BÜCHERL 124; Scorp., MALHOMME 483; Scorp., VACHON 752; Solif., PANOUSE 556; Aran., DENIS 206; Acari, ANDRÉ 21.

Tripolitania.—Pseudoscorp., BEIER 70.

Tunis.—Scorp., VACHON 753; Aran., CLOUDSLEY-THOMPSON 163; Hydrach., DELAMARE DEBOUTTEVILLE 201.

Egypt.—Scorp., ABD-EL-WAHAB 5; Aran., HASSAN 322; Acar., CAMIN 136; Ixod., HOOGSTRAAL ET AL. 359.

Astrakhan.—Acari, BREGETOVA & NELZINA 114.

Kazakhstan.—Acari, VAINSHTEIN 755.

Tadzhikistan.—Acari, BREGETOVA 111.

Turkmenia.—Aran., CHARITONOV 152.

China.—Opil., ROEWER 629, 630.

Korea.—Acari, JAMESON & TOSHIOKA 381.

Japan.—Opil., ROEWER 629; Opil., SUZAKI 708; Aran., YAGINUMA 816; Aran., YOSHIKURA 817; Acari, ASANUMA 35; Acari, ASANUMA ET AL. 37; Acari, EHARA 239; Acari, FUKUZUMI & OBATA 274; Acar., KAMO 395; Acari, MIYAZAWA ET AL. 512; Acari, SASA 645; Acari, SASA & JAMESON 646; Acari, SASA & OGATA 647; Acari, SUYEMOTO ET AL. 707; Acari, SUZUKI 709; Ixod., ASANUMA & SEKIKAWA 36; Hydrach., IMAMURA 370, 371, 372.

Arabia.—Solif., LAWRENCE 445.

Yemen.—Acar., RADFORD 589.

Turkey.—Ixod., MIMIOGLU 507.

Israel.—Opil., ROEWER 624; Acari, RADFORD 592; Ixod., FELDMAN-MUHSAM 256.

Afghanistan.—Ixod., ANASTOS 11.

Far East, Russia.—Acari, BREGETOVA 110.

Iran.—Ixod., NEMENZ 533.

Iraq.—Solif., LAWRENCE 445.

Cape Verde.—Ixod., TENDEIRO 723.

Madeira.—Ixod., DIAS 209.

ORIENTAL REGION

India.—Scorp., KANUNGO 397; Scorp., SINHA 680; Opil., ROEWER 630; Aran., MATHEW 493.

Kashmir.—Acari, TRAUB & EVANS 733.

Pakistan and Kashmir.—Ixod., SARWAR & ABDUSALAM 644.

Madras.—Acari, SELLNICK 669.

Nepal.—Opil., ROEWER 629.

Assam.—Solif., LAWRENCE 445; Opil., ROEWER 629; Acari, KEIFER 405; Acari, SINHA 679, 681; Acari, TRAUB & EVANS 733.

Burma.—Opil., ROEWER 629, 630; Acari, TRAUB & EVANS 733.

Ceylon.—Opil., ROEWER 630.

Andaman Is.—Opil., ROEWER 629.

Fed. Malay States.—Arach., TWEEDIE & HARRISON 741; Opil., ROEWER 630; Acari, AUDY 42; Acari, AUDY & HARRISON 44.

Selangor.—Acari, TRAUB & EVANS 733; Acari, WOMERSLEY 808.

Cochin China.—Acari, ANDRÉ 16.

Indo-China.—Opil., ROEWER 630; Acari, ANDRÉ 17, 19.

Sumatra.—Pseudoscorp., BEIER 68; Opil., ROEWER 630.

Java.—Opil., ROEWER 630.

Borneo.—Opil., ROEWER 629; Acari, TRAUB & AUDY 731.

Sarawak.—Acari, TRAUB & AUDY 731, 732.

Dutch East Indies.—Opil., ROEWER 629.

Philippine Is.—Opil., ROEWER 629, 630; Pentast., YUTUC 820.

AUSTRALIAN REGION AND POLYNESIA

Dutch New Guinea.—Opil., ROEWER 630.

New Guinea.—Acari, SOUTHCOTT 690; Opil., ROEWER 629, 630; Pseudoscorp., BEIER 68.

Australia.—Acari, RAYMENT 597; Aran., ROBERTS 619.

South Australia.—Acari, WOMERSLEY 805, 806, 810; Acari, SOUTHCOTT 689.

Victoria.—Aran., SPILLANE 693; Acari, WOMERSLEY 804, 806, 808; Ixod., ROBERTS 615.

New South Wales.—Acari, WOMERSLEY 804; Ixod., LEGG & SHANAHAN 451.

Northern Territory.—Acari, WOMERSLEY 803.

Queensland.—Acari, DERRICK & WOMERSLEY 208; Acari, OLDS 546; Acari, WOMERSLEY 811, 812; Aran., SMITH 684; Ixod., RIEK 612.

Western Australia.—Pseudoscorp., BEIER 74.

Tasmania.—Acari, MILLER 504; Acari, WOMERSLEY 804.

New Zealand.—Acari, CUMBER 195; Acari, INESON 374; Acari, LAMB 427; Acari, Pentast., BULL 127; Hydrach., STOUT 701, 702; Pentast., GURR 310.

Marianas Is.—Acari, KEIFER 405.

New Hebrides.—Acari, ANDRÉ 18.

ETHIOPIAN REGION

Africa.—Ixod., DIAS 213; Ixod., HOOGSTRAAL 358.

Sahara.—Scorp., BÉDÉ 66.

Senegal.—Acari, ANDRÉ 14.

French Equatorial Africa.—Acari, TAUFFLIER 718.

Portuguese Guinea.—Acari, HUGHES 363; Ixod., TENDEIRO 722.

French Guinea.—Scorp., VACHON 749; Pseudoscorp., VACHON 750.

Cameroons.—Aran., HYATT 367.

Angola.—Ixod., THEILER & ROBINSON 725.

Southwest Africa.—Solif., ROEWER 626.

Rhodesia.—Acari, TILL 729, 730; Ixod., THEILER & ROBINSON 725.

Mashonaland.—Aran., HYATT 367.

Zululand.—Acari, LAWRENCE 440, 443.

South Africa.—Acari, LAWRENCE 441; Acari, RYKE 639.

Transvaal.—Acari, TILL 730; Acari, ZUMPT & TILL 826, 828.

Orange Free State.—Acari, ZUMPT & TILL 825.

Natal.—Acari, ZUMPT & TILL 825.

Cape Province.—Acari, ZUMPT & TILL 827, 829.

Anglo-Egyptian Sudan.—Ixod., HOOGSTRAAL 356; Acari, ZUMPT & TILL 828.

Eritrea.—Acar., RADFORD 590.

Kenya.—Acari, ZUMPT & TILL 826, 828; Ixod., HENSE 328, 329; Ixod., WILEY 796; Ixod., WILSON 801.

Uganda.—Pseudoscorp., BEIER 68; Acari, LAWRENCE 441; Acari, ZUMPT & TILL 825, 829.

Ruanda Urundi.—Ixod., THEILER & ROBINSON 725; Ixod., VAERENBERGH 754.

Tanganyika Territory.—Pseudoscorp., BEIER 77; Solif., LAWRENCE 445; Acari, EVANS 248; Acari, SALT 641.

Belgian Congo.—Pseud., Solif., ROEWER 626; Pseudoscorp., BEIER 69; Pseudoscorp., VACHON 743; Acari, GOSSEMAN 176, 177; Acari, FAIN 254; Acari, JADIN & VERCAMMEN-GRAND-

JEAN 377, 380; Acari, JADIN ET AL. 378, 379; Acari, VERCAMMEN-GRAND-JEAN 760; Ixod., THEILER & ROBINSON 725; Ixod., VAERENBERGH 754.

Central Africa.—Ixod., DIAS 217.

Mozambique.—Solif., ROEWER 626; Opil., ROEWER 625; Aran., BACELAR 47; Ixod., DIAS 212, 214, 215, 216, 218, 219, 220, 221; Acari, TILL 729; Acari, ZUMPT & TILL 827.

Madagascar.—Ambly., FAGE 253.

Réunion.—Opil., ROEWER 630.

NEARCTIC REGION

Alaska.—Ixod., PHILIP ET AL. 577.

Jan Mayen Id.—Acari, MACFADYEN 478.

North Greenland.—Acar., HAMMER 315.

Canada.—Acari, JUDD 391; Acari, LOOMIS 468; Acari, NESBITT 535; Hydrach., HABEEB 311.

Newfoundland.—Aran., HACKMAN 312.

British Colombia.—Ixod., GREGSON 306.

North America.—Acari, BAKER & PRITCHARD 56; Acari, ANDERSON 12; Acari, MARGOLIS 489; Acari, PRATT & GOOD 582; Hydrach., MITCHELL 509.

Arizona.—Aran., LEVI 455.

Arkansas.—Hydrach., MITCHELL 511.

California.—Acari, BEER 67; Acari, BRENNAN & JONES 115; Acari, FLESCHE & RICKER 264; Acari, FURMAN 275, 276; Acari, KEIFER 402, 403, 404, 405; Acari, MCGREGOR 479; Acari, RICKER & FLESCHE 610.

Colorado.—Aran., LEVI 455; Acari, KARDOS 399; Acari, LOOMIS 468; Acari, WOOLLEY 815.

Connecticut.—Acari, PENNER & PARKE 568.

Florida.—Aran., LEVI 455, 456; Aran., ROTH 635; Acari, BEER 67; Acari, KEIFER 404.

Georgia.—Acari, RADFORD 592.

Idaho.—Acar., CAMIN 137.

Illinois.—Pseudoscorp., HOFF 339; Acari, LOOMIS 468.

Kansas.—Acari, BEER 67; Acari, CROSSLEY & LIPOVSKY 193; Acari,

KEIFER 405; Acari, LIPOVSKY & LOOMIS 464; Acari, LOOMIS 468; Acari, LOOMIS & LIPOVSKY 469.

Louisiana.—Acari, BOUDREAUX 102.

Maryland.—Acari, KEIFER 402.

Massachusetts.—Acari, TREAT 735; Ixod., SHAW & CLARK 674.

Michigan.—Aran., LOWRIE 470; Hydrach., MITCHELL 511; Hydrach., COOK 172, 173, 174.

Mississippi.—Acari, ELLIS 241.

Missouri.—Hydrach., MITCHELL 511.

New Jersey.—Aran., LEVI 457.

New Mexico.—Acari, BRENNAN & JONES 115; Acari, LOOMIS 468.

North Carolina.—Aran., BARNES & BARNES 62.

Ohio.—Acari, BELL ET AL. 79; Acari, DAVIS 200; Ixod., EDMUNDS 238.

Oklahoma.—Acari, LOOMIS 468.

Oregon.—Acari, MULAİK & ALLRED 526.

Pennsylvania.—Hydrach., MITCHELL 511.

Texas.—Aran., LEVI 455; Acari, GRIFFITH & WENE 308; Acari, LOOMIS 468; Acari, MULAİK & ALLRED 526.

Utah.—Aran., LEVI 455; Acari, COFFEY 165; Acari, LOOMIS 468.

Virginia.—Pseudoscorp., VACHON 751; Acari, KEIFER 404; Hydrach., MITCHELL 511.

Washington.—Acari, BATCHELOR & BREAKEY 63; Acari, BEER 67.

Wisconsin.—Aran., LEVI 455; Aran., LEVI & FIELD 458; Hydrach., MITCHELL 511.

Wyoming.—Aran., LEVI 455.

CENTRAL AMERICA

Central America.—Acari, BAKER & PRITCHARD 56.

Barbados Is.—Pseudoscorp., BEIER 68.

West Indies.—Arach., BERLAND 81.

Jamaica.—Aran., BAERG 50, 51, 52, 53; Aran., LEWIS 459, 460; Aran., MACDONALD 477; Acari, FONTAINE 268.

Mexico.—Opil., GOODNIGHT & GOODNIGHT 291; Aran., GONZÁLEZ 290; Aran., LEVI 456, 457; Acari, HOFFMANN

348, 349, 350, 351; Acari, MULAİK & ALLRED 526.

Panama.—Aran., CHICKERING 153.

SOUTH AMERICA

South America.—Opil., SOARES & SOARES 685.

Amazons.—Hydrach., VIETS 765.

Argentina.—Aran., BIRABÉN 88, 89, 90; Aran., PIKELIN & SCHIAPELLI 579; Acari, VERGANI 762.

Brazil.—Scorp., BÜCHERL 123, 124; Pseudoscorp., BEIER 70; Solif., ROEWER 625; Aran., BÜCHERL 124, 125, 126; Opil., SOARES & SOARES 686; Acari, CALZA & SAUER 135; Acari, FONSECA 267; Acari, KEIFER 404; Acari, ROCHA & PARDI 620; Acari, SELLNICK 668; Ixod., ARAGÃO & FONSECA 31, 32; Ixod., FONSECA & ARAGÃO 266; Ixod., PARDI & ROCHA 558; Hydrach., VIETS 764; Hydrach., VIETS & PLATE 767.

Chile.—Acari, KEIFER 402; Ixod., DONOSA 222.

Colombia.—Hydrach., LUNDEBLAD 472.

Dutch Guiana.—Hydrach., VIETS 764.

French Guiana.—Aran., CAPORLACCO 139; Acari, FLOCH 265.

Peru.—Scorp., BÜCHERL 124; Pseudoscorp., BEIER 73, 76; Solif., LAWRENCE 445.

Salvador.—Uropyg., Ambly., Solif., Opil., ROEWER 628.

Uruguay.—Aran., WITKIND 802; Hydrach., VIETS 764.

Venezuela.—Scorp., Pedip., Pseudoscorp., Solif., Opil., Aran., SCHENKEL 654; Scorp., SCORZA 664, 665, 666; Pseudoscorp., BEIER 75; Ixod., VOGEL-SANG & DIAS 772, 773.

SOUTH ATLANTIC OCEAN

Tristan da Cunha.—Ixod., ANASTOS 10.

Falkland Is.—Ixod., HOOGSTRAAL 355.

South Georgia.—Aran., TAMBS-LYCHE 715.

Crozet Islands.—Opil., Aran., TAMBS-LYCHE 715.

MARINE

- Ireland.—Pantop., WILLIAMS 798.
 France.—Pantop., BOURDILLON 104.
 Italy.—Pantop., STOCK 698.
 Black Sea.—Pantop., BĂCESCU 48.
 Tunis.—Pantop., BOURDILLON 103.
 Japan.—Pantop., UTINOMI 742.
 South Africa.—Pantop., BARNARD 61.
 Singapore.—Pantop., STOCK 700.
 Java Sea.—Pantop., STOCK 700.
 New South Wales.—Pantop., STOCK 700.
 New Zealand.—Pantop., STOCK 700.
 West Indies.—Pantop., STOCK 699.
 Gulf of Mexico.—Pantop., HEDGPETH 326; Tardig., CHITWOOD 154.
 Venezuela.—Pantop., STOCK 699.

GEOLOGICAL

Carboniferous.—*Adelophthalmus zadrai* Westphalia, PRIBYL 583.

Miocene.—Acari and Aran., Calico Mts., Mojave Desert, California, PALMER & BASSETT 555.

Saline Series, Warcha, Punjab. Acari, GEORGE 286.

MYRIAPODA

GENERAL LITERATURE AND HISTORY

Museums.—Chilop. of Inst. Butantan, BÜCHERL 124.

STRUCTURE

External anatomy.—Diplop., HOFFMAN 343, 344, 345; Diplop., MANTON 487.

Internal anatomy.—Peritrophic membrane in Diplop., MASON & GILBERT 491; Malpighian tubules and nephridia in Chilop., Diplop. and Symph., PALM 552.

Muscles.—Diplop., MANTON 487.

Reproductive system.—Chilop., TUZET & MANIER 738; Diplop., WEST 790.

Genitalia.—Diplop., HOFFMAN 346.

Glands.—Cerebral glands of *Scutigera coleoptrata*, GABE 277; Genital glands of *Scolopendra cingulata*, ROCHE 622.

Cytology.—Blood of *Schizophyllum rutilans* and *Glomeris marginata*, TUZET & MANIER 740.

PHYSIOLOGY

Respiration.—Chilop., Paurop., LAWRENCE 446.

Senses.—Chilop., Diplop., LAWRENCE 446.

Internal secretion.—Neuro-secretive cells in Diplop., GABE 282.

Longevity.—Chilop., Diplop., Symph., Paurop., LAWRENCE 446.

Growth.—Chilop., Diplop., Symph., Paurop., LAWRENCE 446.

Bio-chemistry.—Absorption of dyes by Chilop., Diplop. and Symph., PALM 552.

Locomotion.—Chilop., Diplop., LAWRENCE 446; Diplop., MANTON 487.

Fluorescence, in Chilop., Diplop., LAWRENCE 444.

REPRODUCTION

Reproduction. — Chilop., Diplop., LAWRENCE 446; *Cylindroiulus* (A.) *silvarum*, SAUDRAY 648.

DEVELOPMENT

Egg.—*Cylindroiulus* (A.) *silvarum*, SAUDRAY 648.

Spermatogenesis.—Chilop., TUZET & MANIER 738; Meiosis in *Scutigera forceps*, ANSLEY 29; *Polyxenus lagurus*, SCHÖMANN 658.

Larval stages.—*Cylindroiulus silvarum*, SAUDRAY 648.

Life history.—*Pachymerium ferrugineum*, PALMÉN & RANTALA 554.

EVOLUTION AND GENETICS

Evolution of taxonomic groups.—Diplop., MANTON 487.

ECOLOGY AND HABITS

Ecological associations.—Cavernicolous.—Chilop., Diplop. in France, BALUZUC ET AL. 60; Chilop., Diplop., Symph. in Italy, MANFREDI 484; Chilop., Diplop. of Yugoslavia, REMY 604.

Soil ecology.—Symph., Paurop. in Southern Michigan, HAIRSTON & BYERS 314.

Migration.—Malayan millipeds, JEEKEL 383.

Distribution.—*Pachymerium ferrugineum*, PALMÉN & RANTALA 554.

Dispersal.—Diplop., CLOUDSLEY-THOMPSON 161.

Feeding habits.—Chilop. natural enemies of *Oliarus atkinsoni* (Hemiptera), CUMBER 194; Chilop., Diplop., Symph., Paurop., LAWRENCE 446.

Economics.—*Pseudonannoclene paulista* damaging potatoes, BOOCK & GONZAGA E LOBDELLO 98.

DISTRIBUTION PALAEARCTIC REGION

Great Britain.—Chilop., BAGNALL 54; Chilop., Diplop., BUTLER 129; Chilop., CLOUDSLEY-THOMPSON 163; Diplop., ROUSE 631.

France.—Chilop., Diplop., BALUZUC ET AL. 60; Diplop., SCHUBART 663; Symph., JUPEAU 392; Symph., ROCHET 621; Paurop., REMY 605.

Holland.—Diplop., JEEKEL 384.

Denmark.—Symph., Paurop., SCHELLE 653.

Switzerland.—Diplop., BATOR & SCHMOELZER 64; Paurop., GISIS 289.

Czechoslovakia.—Diplop., GULICKA 309; Diplop., LANG 432.

Poland.—Chilop. Pomerania, KACZMAREK 394.

Yugoslavia.—Chilop., Diplop., REMY 604.

Hungary.—Diplop., LOKSA 466.

Italy.—Chilop., MANFREDI 484, 485; Diplop., MANFREDI 484, 485, 486; Symph., MANFREDI 484.

North Africa.—Diplop., CONDÉ 170.

Algeria.—Paurop., REMY 608.

Morocco.—Chilop., PANOUSE 556.

Japan.—Diplop., MIYOSI 513; Diplop., TAKAKUWA 714.

Balearic Is.—Chilop., Diplop., JOLIVET 388.

ORIENTAL REGION

Malaya.—Chilop. and Diplop., TWEDDIE & HARRISON 741.

Philippine Is.—Symph., SCHELLE 651.

AUSTRALIAN REGION AND POLYNESIA

Western Australia.—Symph., SCHELLE 651.

New Zealand.—Paurop., REMY 603.

Palmyra Id.—Diplop., CHAMBERLIN 149.

ETHIOPIAN REGION

French Guinea.—Diplop., SCHUBART 662.

Ivory Coast.—Diplop., SCHUBART 661; Symph., HINSCHBERGER 332; Paurop., REMY 602.

Cameroons.—Symph., JUPEAU 393.

Angola.—Symph., HINSCHBERGER 332.

Uganda.—Symph., SCHELLE 652.

Belgian Congo.—Symph., HINSCHBERGER 332, 333; Paurop., REMY 602.

NEARCTIC REGION

Canada.—Diplop., CAUSEY 144.

Newfoundland.—Chilop., PALMÉN 553.

Arkansas.—Diplop., CAUSEY 146.

California.—Chilop., CHAMBERLIN 150; Diplop., CHAMBERLIN 151; Diplop., CAUSEY 144.

Idaho.—Diplop., CAUSEY 144.

Illinois.—Chilop., AUERBACH 46.

Louisiana.—Diplop., CAUSEY 146.

Michigan.—Diplop., JOHNSON 386, 387; Paurop., REMY 606.

Mississippi.—Diplop., CAUSEY 146.

Missouri.—Chilop., CRABILL 186.

Oregon.—Diplop., CAUSEY 144.

Utah.—Diplop., CAUSEY 144.

Washington.—Diplop., CAUSEY 143; Diplop., CAUSEY 144.

Wyoming.—Diplop., CAUSEY 144.

CENTRAL AMERICA

Jamaica.—Diplop., HOFFMAN 342, 344, 345, 346.

Guatemala.—Diplop., HOFFMAN 341.

Mexico.—Diplop., CAUSEY 145; Diplop., HOFFMAN 340, 341.

Panama.—Diplop., HOFFMAN 341; Paurop., REMY 607.

Salvador.—Chilop., Diplop., KRAUS 421.

SOUTH AMERICA

South America.—Diplop., HOFFMAN 347.

Argentina.—Chilop., BÜCHERL 124.

Brazil.—Chilop., BÜCHERL 124; Diplop., SCHUBAERT 660.

Peru.—Chilop., BÜCHERL 124; Chilop., KRAUS 419; Diplop., KRAUS 420.

Venezuela.—Diplop., CAUSEY 145.

GEOLOGICAL

Carboniferous.—*Euphoberia llarenai*, Spain, MELÉNDEZ 496.

ONYCHOPHORA

STRUCTURE

Alimentary system.—Onych., GABE 278.

Muscles.—Dorsal musculature of *Peripatopsis*, EWER & BERG 252.

PHYSIOLOGY

Respiration.—Onych., LAWRENCE 446.

Nervous system.—Neuro-secretive cells in Onych., GABE 279.

Growth.—Onych., LAWRENCE 446.

Longevity.—Onych., LAWRENCE 446.

Locomotion.—Onych., LAWRENCE 446.

Fluorescence.—Onych., LAWRENCE 444.

DEVELOPMENT

Fertilization.—*Peripatus*, MILNE & MILNE 506.

Moult.—Onych., LAWRENCE 446.

ECOLOGY AND HABITS

Distribution.—Onych., VACHON 748.

Feeding habits.—Onych., LAWRENCE 446; *Peripatus*, MILNE & MILNE 506.

DISTRIBUTION

El Salvador.—Onych., ZILCH 823.

Peru.—Onych., ZILCH 824.

III.—SYSTEMATIC INDEX

N.B.—The numbers in large Clarendon type refer to the list of Titles, those in small to the volume number of the reference.

MEROSTOMATA

XIPHOSURA

[No record.]

EURYPTERIDA

†*Adelophthalmus zadrai* sp. nov. Suchá zone, Karviná Beds, Horni Suchá, Westphalia p. 72 figs.; *A. imhofi* redescribed p. 69 figs.; *A. granosus* p. 68 figs., PŘIBYL Bull. int. Acad. Prague 53 1953.

†*Hughmilleria norvegica* p. 210 fig., HOLTEDAHN 353.

PANTOPODA

Classification of fossil forms, phylogeny, HEDGPETH 324.

Status of Helfer's types, STOCK 697.

Key to South African families, genera and species, BARNARD 61.

Faunal list.—Marseille, France, BOURDILLON 104; Gulf of Mexico, HEDGPETH 326.

AUSTRODECIDAE fam. nov. defined p. 151, STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954.

Achelia segmentata sp. nov. ♀ Akkeshi, Japan p. 20 figs.; *A. alaskensis* ♂ + ♀ remarks and measurements p. 14 figs.; *A. echinata* ♀ remarks and measurements p. 11 figs.; *A. ohshimai* allotype ♂ described p. 18 figs., UTINOMI Publ. Akkeshi mar. biol. Sta. No. 3 1954; *A. transfuga* sp. nov. ♀ Lyttelton Harbour p. 109 figs.; *A. variabilis* sp. nov. ♂ + ♀ Three Kings, New Zealand p. 100 figs.; *A. australiensis* comb. nov. ♀ p. 105 fig.; *A. assimilis* ♂ + ♀ pp. 98 and 99 figs.; *A. bituberculata* ♂ p. 94 figs.; *A. dohrni* ♀ p. 107 figs., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *A. gracilis* new to Venezuelan coast p. 117, STOCK 699; *A. quadridentata* p. 138 fig., BARNARD 61; *A. simplex* ♀ described p. 182 figs.; *A. echinata* p. 182 fig., STOCK 698.

Ainigma ornatum p. 145 fig., BARNARD 61.

Ammothella indica sp. nov. ♂ Sunda Straits; ♀ Singapore p. 113 figs.; *A. key* to species p. 119, STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *A. bi-unguiculata* ♀ described p. 151 figs., BOURDILLON 104.

Anoplodactylus glandulifer sp. nov. ♂ + ♀ Singapore p. 80 fig.; *A. mamillulosus* sp. nov. ♀ + ♂ Sagami Sea p. 72 figs.; *A. minutissimus* sp. nov. ♂ Singapore p. 78 fig.; *A. gestiens* ♀ p. 71 fig.; *A. haswelli* ♂ p. 86 fig.; *A. investigatoris* ♀ p. 85 figs.; *A. pycnosoma* ♂ + ♀ p. 75 fig.; *A. sazaatilis* ♂ + ♀ p. 80 fig.; *A. trispinosus* p. 81 fig.; *A. versluyisi* ♀ p. 84 figs.; *A. sp.* ♀ p. 88 fig., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *A. angulatus* ♂ p. 184 fig., STOCK 698; *A. batangense* p. 39 figs.; *A. pycnosoma* p. 41 figs., STOCK 697; *A. parvus* new to Venezuela p. 127; *A. trispinosus* new to western Atlantic p. 127, STOCK 699; *A. pelagicus* p. 128 fig., BARNARD 61.

Ascorhynchus cactoides sp. nov. Kom-bir, Banda p. 132 figs.; *A. auchenicum* ♂ + ♀ p. 124 figs.; *A. cryptopygium* ♂ + ♀ p. 121 fig.; *A. japonicum* ♂ p. 126 figs.; *A. latum* ♂ p. 128 fig.; *A. melvardi* ♀ p. 128 figs.; *A. minutum* ♂ + ♀ p. 121 fig., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *A. ornatum* p. 41 figs., STOCK 697.

Austrodecus frigorigugum sp. nov. ♀ Three Kings, New Zealand p. 156 fig.; *A. gordonae* sp. nov. ♀ + ♂ Three Kings, New Zealand p. 153 figs., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954.

Austrotraptus thermophilus p. 146 figs., BARNARD 61.

Böhmia chelata p. 133 fig.; *B. tuberosa* p. 136 fig., BARNARD 61.

Callipallene conirostris sp. nov. ♀ Sagami Bay p. 39 figs.; *C. cuspidata* sp. nov. ♂ Sagami Sea p. 37 fig.; *C. brevirostris* subsp. novae-zealandiae ♂ p. 48 fig.; *C. brevirostris* subsp. p. 43 fig.; *C. emaciata* subsp. micracantha subsp. nov. ♂ 37° 05' S., 150° 05' E. p. 44 figs.; *C. emaciata* subsp. p. 46 figs.; *C. dubiosa* ♀ p. 41 fig., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *C. brevirostris brevirostris* new to West Indies and Venezuelan coast p. 115, STOCK 699; *C. phantoma* p. 264 figs., BĂCESCU 48.

Colossendeis chitinoza p. 161 fig., STOCK 700.

Discoarachne brevipes p. 149 figs., BARNARD 61.

Endeis clipeatus p. 129 fig.; *E. mollis* p. 130 fig., BARNARD 61; *E. mollis* redescribed, distribution p. 4 figs., BOURDILLON 103; *E. procera* ♀ p. 88 fig., STOCK 700.

Hannonia typica p. 124 fig., BARNARD 61.

Hemichela gen. nov. [Amotheidae] defined p. 90; type species *H. micrasterias* sp. nov. ♀ 5° 51' S., 106° 22' E., Java Sea p. 90 figs., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954.

Heterofragilis amica sp. nov. ♀ 32° 15' N., 128° 12' E. p. 136 figs., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954.

Heteronymphon exiguum p. 37 figs., STOCK 697.

Kyphomia setacea p. 144 fig., BARNARD 61.

Lecythorhynchus maginatum ♀ p. 139 fig., STOCK 700.

Metapallene dubitans p. 114 fig., BARNARD 61.

Neopallene antipoda sp. nov. ♂ Cape Maria van Diemen, New Zealand p. 34 figs., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954.

Nymphon immane sp. nov. ♂ Eden, New South Wales p. 25 figs.; *N. singulare* sp. nov. ♂ + ♀ 37° 05' S., 150° 05' E. p. 21 figs.; *N. elongatum* p. 17 fig.; *N. japonicum* emend. p. 18 fig.; *N. kodanii* p. 21 fig.; *N. ortmanni* ♂ p. 20 fig., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *N. comes* p. 92 figs.; *N. crenatiunguis* p. 101 fig.; *N. distensum* p. 98 fig.; *N. microctenatus* p. 95 fig.; *N. pilosum* p. 100 fig.; *N. setimanus* p. 103 fig.; *N. signatum* p. 96 fig.; *N. key* to South African species p. 90, BARNARD 61; *N. ortmanni* p. 34, STOCK 697; *N. striatum*, measurements of ♂ p. 2 fig., UTINOMI 742.

Nymphopsis cuspidata p. 142 figs., BARNARD 61.

Oropallene (?) sp. ♂ p. 29 fig., STOCK 700.

Pallenoides magnicollis p. 115 figs., BARNARD 61.

Pallenopsis gippslandiae sp. nov. ♂ 38° 07' S., 149° 10' E. p. 65 figs.; *P. obliqua* ♂ p. 64 fig.; *P. ovalis* ♂ p. 64 fig.; *P. sibogae* ♀ + ♂ p. 63 fig.; *P. temperans* ♂ p. 63 fig., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *P. brevidigitata* p. 120 figs.; *P. intermedia* p. 117 figs.; *P. ositans* p. 122 fig.; *P. (R.) ovalis* p. 120 fig.; Key to South African species p. 116, BARNARD 61.

Parapallene capillata sp. nov. ♀ + ♂ Singapore p. 52 figs.; *P. exigua* sp. nov. ♂ + ♀ Three Kings, New Zealand p. 57 fig.; *P. (?) aculeata* sp. nov. ♀ 37° 05' S., 150° 05' E. p. 59 figs.; *P. australiensis* ♀ p. 50 fig.; *P. nierstraszi* ♀ p. 52 fig., STOCK Vidensk. Medd. dansk. naturh. Foren.-Kbh. 116 1954; *P. algoae* p. 111 fig.; *P. calmani* p. 110 fig.; *P. hodgsoni* p. 112 fig.; *P. spinosus* p. 108 fig.; *P.* key to South African species p. 108, BARNARD 61.

Phoxichilidium hokkaidoense sp. nov. ♂ + ♀ Muroran, Akkeshi Bay p. 4 figs.; *P.* discussion of relationship with *Anoplodactylus* p. 7, UTINOMI Publ. Akkeshi mar. biol. Sta. No. 3 1954.

Pipetta capensis p. 86 fig., BARNARD 61.

Procidella gibber status nomen dubium p. 38 figs., STOCK 697.

Propallene kempi ♂ p. 33 fig.; *P. longiceps* ♀ p. 31 fig., STOCK 700.

Pseudopallene zamboangae ♀ described p. 61 fig., STOCK 700.

Pycnogonum planum sp. nov. ♀ Kaipara, New Zealand p. 165 fig.; *P. tenue* ♀ p. 162 fig., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *P. forte* p. 152 figs.; *P. portus* p. 153 fig.; *P. pussillum* p. 155 fig. *P.* key to South African species p. 151, BARNARD 61.

Queubus jamesanus p. 157 fig., BARNARD 61.

Rhopalorhynchus kröyeri p. 88 fig., BARNARD 61.

Tanystylum acuminatum sp. nov. ♀ Public, Gustavia, St. Barthélemy, West Indies p. 125 fig.; *T. geminum* sp. nov. ♀ + ♂ Simson Bay Lagoon, Flamingo Pond, St. Martin, West Indies p. 120 fig.; *T. hummelincki* sp. nov. ♂ La

Pecha, Los Frailes, West Indies p. 122 figs.; *T. tubirostre* sp. nov. ♂ Punt Vierkant, Bonaire: ♀ Piscadera Bay, Curaçao, West Indies p. 117 figs., STOCK Natuurwet. Stud. Suriname No. 10 1954; *T. excuratum* sp. nov. ♂ Lyttelton Harbour p. 147 figs.; *T. scrutator* sp. nov. ♀ Misaki p. 142 fig.; *T. neo-rhetum* ♂ + ♀ p. 149 figs., STOCK Vidensk. Medd. dansk. naturh. Foren. Kbh. 116 1954; *T. anthomasthi* ♂ + ♀ supplementary description p. 23 figs., UTINOMI 742; *T. conirostre* p. 266 figs., BĂCESCU 48.

ARACHNIDA

SCORPIONES

Faunal list.—Venezia, CAFORCIACCO 138; Tunis, VACHON 753; Venezuela with key and distribution p. 179, SCORZA 665.

Ananteroides feae ♀ p. 9 figs., VACHON 749.

Broteas granulatus p. 172 figs., SCORZA 664.

Broteochactas orinocensis sp. nov. ♂ + ♀ Caño Fiscal, Venezuela p. 1 fig., SCORZA Noued. cient. Mus. Hist. nat. Caracas No. 12 1954.

Buthus quinquestriatus ♀ genital system p. 1 figs., ABD-EL-WAHAB 5.

Chactupsis insignis p. 173 figs., SCORZA 664.

Eremobates purpuri, cephalic nervous system and segmentation p. 2 figs., HENRY 331.

Pandinus imperator ♀ + ♂ p. 15 figs., VACHON 749.

Teuthraustes carmelinae sp. nov. ♀ + ♂ Ugueto, Alto Orinoco, Venezuela p. 168 figs., SCORZA Bol. Soc. venezol. Cienc. nat. 15 1954.

Tityus valerae sp. nov. ♂ Valera, Venezuela p. 9; key to separation of near relatives p. 8, SCORZA Noued. cient. Mus. Hist. nat. Caracas No. 12 1954.

UROPYGI

Mastigoproctus tantalus sp. nov. ♂ + ♀ El Salvador p. 57 fig., ROEWEE Senckenb. Biol. 35 1954; *M. giganteus*, cephalic nervous system and segmentation p. 2 fig., HENRY 331. •

Trithyreus schoutedeni sp. nov. ♀ Grotte de Lubushi, Belgian Congo p.

265 figs., ROEWER Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

AMBLYPYGI

Charinus madagascariensis sp. nov. Lokoubé, S.-E. of Nossi-Bé, Madagascar p. 183 figs., FAGE Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

PALPIGRADI

[No record.]

RICINULEI

[No record.]

PSEUDOSCORPIONES

Synopsis of the British fauna with keys to suborders, genera and species, EVANS & BROWNING 249.

Faunal list.—Venezia, CAPORACCIO 138; Hamburg, Germany, WEIDNER 786.

Allocheres tripolitanus sp. nov. ♂ + ♀ Misurata Oasis, Tripolitania p. 324 figs., BEIER Ann. Mus. Stor. nat. Genova 66 1954.

Anepsiochernes uncinatus sp. nov. ♂ + ♀ Msingi, Tanganyika Territory p. 84 fig., BEIER Zool. Anz. 152 1954.

Apocheiridium stannardi sp. nov. ♀ + ♂ Herod, Illinois p. 193 figs., HOFF Trans. Ill. Acad. Sci. 45 1952.

Atherochernes gen. nov. [Chernetidae: Hesperochernetini] defined p. 140; type-species *A. venezuelanus* sp. nov. ♀ El Junquito, Venezuela p. 141 fig., BEIER Mem. Mus. Civ. Nat. Verona 4 1954.

Cacodemoniellus gen. nov. [Cheliferidae] defined p. 326; *C. mimulus* sp. nov. ♂ + ♀ Palmeira, Paraná, South Brazil p. 326 fig., BEIER Ann. Mus. Stor. nat. Genova 66 1954.

Calidiocheres gen. nov. [Chernetidae: Chernetini] defined p. 136; type-species *C. musculi* sp. nov. ♂ + ♀ Llanos, Venezuela p. 136 fig., BEIER Mem. Mus. Civ. Stor. Nat. Verona 4 1954.

Calymmachernes gen. nov. [Chernetidae] type species *C. angulatus* sp. nov. ♀ Walpole, Western Australia p. 25 fig., BEIER Kungl. Fysiogr. Sällsk. Handl. N.F. 65 1954.

Catatemnus togoensis ♀ p. 29 fig., VACHON 750.

Chamberlinochthonius gen. nov. [Chthoniidae] defined p. 105; type species *C. henroti* sp. nov. ♂ in cave

between Frankford and Lewisburg, Virginia p. 107 figs., VACHON Notes biospeologiques 7 1952.

Cheiridium firmum sp. nov. ♀ + ♂ Pinkstaff, Lawrence Co., Illinois p. 188 figs., HOFF Trans. Ill. Acad. Sci. 45 1952.

Chthonius dacnodes new to Great Britain p. 1, EVANS & BROWNING 249.

Compsaditha aburi ♀ p. 19 figs., VACHON 750.

Coniocheres globosus sp. nov. ♂ + ♀ Porongorups, Western Australia p. 19 fig.; *C. crassus* sp. nov. ♂ + ♀ Denmark, Western Australia p. 21 fig., BEIER Kungl. Fysiogr. Sällsk. Handl. N.F. 65 1954.

Ectromachernes lamottei sp. nov. ♂ Mont To, Nimba, French Guinea p. 38 figs., VACHON Mém. F.A.N. No. 19 Rés. Mont Nimba 1952.

Ellingsenius hendrickxi sp. nov. ♀ Tshinbinda, Kivu, Belgian Congo p. 284 fig., VACHON Ann. Mus. Congo belge N.S. 4to Zool. 1 1954; *E. ugandanus* sp. nov. ♀ Uganda p. 488 fig., BEIER Ann. Mag. nat. Hist. (10) 15 1935.

Goniocheres beieri sp. nov. ♀ Kéoulenta, Mont Nimba, French Guinea p. 31 figs.; *G. lislei* sp. nov. ♀ Edea, Cameroons p. 34 figs., VACHON Mém. F.A.N. No. 19 Rés. Mont Nimba 1952.

Hansenius schoutedeni sp. nov. ♂ Komi, Belgian Congo p. 138 fig., BEIER Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Ideobisium fenestratum sp. nov. ♂ + ♀ Sivia, South Peru p. 3 figs., BEIER E. Titschack. Beitr. Fauna Perus 4 Jena 1954; *I. lepesmei* ♂ p. 24 figs.; *I. simile* ♂ p. 25 figs.; *I. crassimanum* ♀ p. 26 fig., VACHON 750.

Microbisium dumicola new to Great Britain p. 1, EVANS & BROWNING 249.

Microchelifer granulatus sp. nov. ♂ Ituri, Mt. Wago, Belgian Congo p. 137 fig., BEIER Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Minnizia occidentalis sp. nov. ♀ Atar, Mauritania p. 1022 figs., VACHON Bull. Inst. franç. Afr. noire 16A 1954.

Nanolpium congium sp. nov. ♂ Kambove, Belgian Congo p. 132 fig., BEIER Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Neobisium (*N.*) *delphinaticum* sp. nov.
♂ Tête de l'Aure, Dauphiné, France p. 155 fig., BEIER Ann. naturh. Mus. Wien 59 1953; *N. (Blothrus) patrizii* sp. nov. ♂ Grotta degli Ausi (Prossadi) S. Lazio, Italy p. 139 fig., BEIER Boll. Soc. ent. ital. 83 1953.

Pachyolpium granulatum sp. nov. ♂ Los Roques, Krashki; ♀ Cerro Oeste, Orchila, Venezuela p. 132 fig., BEIER Mem. Mus. Civ. Stor. Nat. Verona 4 1954.

Parachernes (Argentochnes) peruanus sp. nov. ♂ + ♀ Sivia, South Peru p. 6 figs., BEIER E. Titschack, Beitr. Fauna Perus 4 Jena 1954.

Paratemnus perpusillus sp. nov. ♂ + ♀ Barbados Is. (Windward Is.) p. 487 fig.; *P. sumatranus* sp. nov. ♂ + ♀ Singkarak, Sumatra p. 485 fig., BEIER Ann. Mag. nat. Hist. (10) 15 1935; *P. persimilis* ♀ p. 30 fig., VACHON 750.

Plesiowithius gen. nov. [Cheliferidae, Withinae] defined p. 1029; type species *P. dekeyseri* sp. nov. ♂ + ♀ Atar, Mauritania p. 1026 figs., VACHON Bull. Inst. franç. Afr. noire 16A 1954.

Protogarypinus gen. nov. [Olpiidae] type species *P. giganteus* sp. nov. ♀ Denmark, Western Australia p. 4 fig., BEIER Kungl. Fysiogr. Sällsk. Handl. N.F. 65 1954.

Pseudoblothrus strinatii sp. nov. ♂ Grotte de Pertuis, Jura neuchâtelois, Switzerland p. 212 figs.; P. key to species p. 217, VACHON Bull. Mus. Hist. nat. Paris (2) 26 1954.

Pseudochernes gen. nov. [Cheliferidae, Paragoniochernetinae] defined p. 86; type species *P. crassimanus* sp. nov. ♂ Wahi, Lake Victoria, p. 87 figs., BEIER Zool. Anz. 152 1954.

Pseudohorus conqicus sp. nov. ♂ + ♀ Kambove, Belgian Congo p. 133 fig., BEIER Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Rhacochelifer andreinii sp. nov. ♂ Sliten, Tripolitania p. 329 fig., BEIER Ann. Mus. Stor. nat. Genova 66 1954.

Rhinochernes gen. nov. [Chernetidae] defined p. 7; type species *R. granulatus* sp. nov. ♂ Aina, South Peru p. 8 figs., BEIER E. Titschack. Beitr. Fauna Perus 4 Jena 1954.

Rhopalochernes titschacki nom. nov. pro *Chelifer germainii* Ellingsen 1905

non Balzan 1890, Sivia, South Peru p. 9 figs., BEIER E. Titschack. Beitr. Fauna Perus 4 Jena 1954.

Semeiochernes extraordinarius sp. nov. ♂ + ♀ Rancho Grande, Venezuela p. 138 fig., BEIER Mem. Mus. Civ. Stor. Nat. Verona 4 1954.

Steiratemnus curtus sp. nov. ♀ Pemberton, Western Australia p. 15 fig.; S. key to species p. 16, BEIER Kungl. Fysiogr. Sällsk. Handl. N.F. 65 1954.

Stenolpium gen. nov. [Olpiidae] defined p. 5; type species *S. peruanum* sp. nov. ♀ Payte, Peru p. 5, BEIER E. Titschack. Beitr. Fauna Perus 4 Jena 1954; *S. asperum* sp. nov. ♂ + ♀ Arequipa, Peru p. 325 fig., BEIER Senckenbergiana 34 1954.

Stenowithius parvulus sp. nov. ♀ Flandria, Belgian Congo p. 136 fig., BEIER Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Sundochernes australiensis sp. nov. ♀ Denmark, Western Australia p. 16 fig.; *S. dubius* sp. nov. ♀ Augusta, Western Australia p. 18 fig., BEIER Kungl. Fysiogr. Sällsk. Handl. N.F. 65 1954.

Synsphyronus (Maorigarypus) elegans sp. nov. ♂ + ♀ Yorkrakine Tammin, Western Australia p. 13 figs.; *S. (M.) gisléni* sp. nov. ♀ Denmark, Western Australia p. 9 fig.; *S. (M.) hanseni* ♂ + ♀ p. 11 fig.; S. key to species p. 8, BEIER Kungl. Fysiogr. Sällsk. Handl. N.F. 65 1954.

Tamenus schoutedeni sp. nov. ♀ Arebi, Bondo-Moto, Belgian Congo p. 135 fig., BEIER Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Tridenchthonius peruanus sp. nov. ♂ + ♀ Sivia, South Peru p. 1 fig.; BEIER E. Titschack. Beitr. Fauna Perus 4 Jena 1954; *T. serrulatus* ♂ + ♀ p. 20 figs., VACHON 750.

Tropidowithius gen. nov. [Cheliferidae] defined p. 10; type species *T. peruanus* sp. nov. ♂ + ♀ Sivia, South Peru p. 11 fig., BEIER E. Titschack Beitr. Fauna Perus 4 Jena 1954.

Tyrannochthonius (T.) gigas sp. nov. ♀ El Junquito, Venezuela p. 131 fig., BEIER Mem. Mus. Civ. Stor. Nat. Verona 4 1954; *T. pusillus* sp. nov. ♂ + ♀ Sivia, South Peru p. 2 fig., BEIER E. Titschack Beitr. Fauna Perus

4 Jena 1954; *T. contractus* ♂ + ♀ p. 22 figs., VACHON 750.

Xenolpium nova-guineense sp. nov. ♀
New Guinea p. 484 fig., BEIER Ann.
Mag. nat. Hist. (10) 15 1935.

SOLIFUGAE

Ammotrecha friedländeri sp. nov. ♂ + ♀
Sierra de Mor, Mendes, Brazil p. 383
figs., ROEWER Abh. naturw. Ver.
Bremen 33 1954.

Ammotrechula schusteri sp. nov. ♂
San Miguel, El Salvador p. 61 fig.,
ROEWER Senckenb. Biol. 35 1954.

Biton gaerdesi sp. nov. ♂ Okahandja,
Southwest Africa p. 264 figs.; *B.
mossambicus* sp. nov. ♂ Tete, Mozam-
bique p. 264 fig., ROEWER Ann. Mus.
Congo belge N.S. 4to Zool. 1 1954; *B.
philbyi* sp. nov. ♂ Taif, Arabia p. 114
fig.; *B. truncatidens* sp. nov. ♂ Ashaira,
Arabia p. 116 fig., LAWRENCE Proc.
zool. Soc. Lond. 124 1954.

Ceroma macrognatha sp. nov. ♂ Mbeya
Mountain, Tanganyika p. 113 fig.,
LAWRENCE Proc. zool. Soc. Lond. 124
1954.

Ferrandia arabica sp. nov. ♂ Hadda,
Arabia p. 116 fig.; *F. robusta* sp. nov.
♀ Khurma, Arabia p. 118 fig., LAW-
RENCE Proc. zool. Soc. Lond. 124 1954.

Galeodellus bicolor sp. nov. ♂ Basrah,
Iraq p. 120, LAWRENCE Proc. zool. Soc.
Lond. 124 1954.

Karschia nubigena sp. nov. ♂ Mount
Everest, India p. 111 fig., LAWRENCE
Proc. zool. Soc. Lond. 124 1954.

Mummucina masculina sp. nov. ♂
Capachica, Peru p. 121 fig., LAWRENCE
Proc. zool. Soc. Lond. 124 1954.

Othoes hirsti sp. nov. ♂ Jedda, Saudi
Arabia p. 118 fig., LAWRENCE Proc.
zool. Soc. Lond. 124 1954.

Pseudocleobis ovicornis sp. nov. ♂
Capachica, Peru p. 123 fig., LAWRENCE
Proc. zool. Soc. Lond. 124 1954.

Solpuga schoutedeni sp. nov. ♂ + ♀
Kamina, Belgian Congo p. 262 fig.,
ROEWER Ann. Mus. Congo belge N.S.
4to Zool. 1 1954.

OPILIONES

Key to neotropical genera of Pachy-
linae with faunal list, SOARES & SOARES
685.

Faunal list.—Venezia, CAPORIACCO
138; Hamburg, Germany, WEIDNER
786.

GAGRELLEAE key to gen. p. 184,
ROEWER 629.

Altobunus key to species p. 236,
ROEWER 629.

Antigrella gen. nov. [Gagrellinae]
defined p. 235; type species *A. orissana*
sp. nov. ♂ Orissa, India p. 235 fig.,
ROEWER Senckenb. Biol. 35 1954.

Caelopygus pseudomacrocanthus sp.
nov. ♂ + ♀ Parque Nacional da Serra
Orgãos, Terezopolis, Rio de Janeiro,
Brazil p. 491 figs., SOARES & SOARES
Pap. Dep. Zool. Sec. Agric. S. Paulo
11 1954.

Callereca teteana sp. nov. ♂ Tete,
Mosambique p. 380, ROEWER Abh.
naturw. Ver. Bremen 33 1954.

Chersobleptes gibber sp. nov. ♂ + ♀
Santa Ana, El Salvador p. 64 fig.; *C.
sellatus* sp. nov. ♀ Santa Ana: ♂ San
Vicente, El Salvador p. 65 fig., ROEWER
Senckenb. Biol. 35 1954.

Cleoxestus gen. nov. [Assamiidae:
Hypoxestinae] defined p. 377; type
species *C. luteipictus* sp. nov. ♀ Tete,
Mosambique p. 377, ROEWER Abh.
naturw. Ver. Bremen 33 1954.

Corcovadesia gen. nov. [Phalango-
didae: Tricommatinae] defined p. 506;
type species *C. inermis* sp. nov. Corco-
vado, Rio de Janeiro, Brazil p. 506
fig., SOARES & SOARES Pap. Dep. Zool.
Sec. Agric. S. Paulo 11 1954.

Cynorta gregaria sp. nov. ♂ + ♀ San
Martin, Vera Cruz, Mexico p. 348 fig.,
GOODNIGHT & GOODNIGHT Trans. Amer.
micr. Soc. 73 1954; *C. salvadorensis* sp.
nov. ♂ + ♀ El Salvador p. 68 fig.,
ROEWER Senckenb. Biol. 35 1954.

Cynortina acanthotibialis ♂ + ♀ p.
344 fig., GOODNIGHT & GOODNIGHT 291.

Egaenasser gen. nov. [Phalangiidae:
Phalangiinae] p. 204; type species *E.
extraordinarius* sp. nov. ♂ El Escorial,
Spain p. 204 fig., ROEWER Abh. naturw.
Ver. Bremen 33 1953.

Eucynorta interposita sp. nov. ♂ + ♀
El Salvador p. 67 fig., ROEWER
Senckenb. Biol. 35 1954; *E. wieden-
mayeri* sp. nov. ♂ + ♀ El Pozon,
Provincia Falcon, Venezuela p. 54 fig.,

SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Eugagrella abdominalis sp. nov. ♀ Allahabad, Bengal p. 285 fig.; *E. aemula* sp. nov. ♀ Hankau, China p. 288 fig.; *E. argentata* sp. nov. ♂ + ♀ Halmahera p. 289 figs.; *E. ceylonensis* sp. nov. ♂ Kandy, Ceylon p. 283; *E. cuernosa* sp. nov. ♂ + ♀ Cuernos Mts., Negros, Philippine Is. p. 288 fig.; *E. fokiana* sp. nov. ♂ Fokien, China p. 288; *E. malabarica* sp. nov. ♂ + ♀ Malabar Coast, India p. 284; *E. minima* sp. nov. ♂ Pashok, Sikkim p. 285 fig.; *E. rufispina* sp. nov. ♂ Sulu Id. p. 287 fig.; *E. yuennanana* sp. nov. ♀ Yunnan p. 287; *E. zilchi* sp. nov. ♂ + ♀ Fr.-Wilhelm-Hafen, New Guinea p. 289; *E. latidlavina* p. 285 fig. *E.* key to species p. 282, ROEWER Senckenbergiana Biol. 35 1954.

Gagrella aenigra sp. nov. ♂ Yunnan, China p. 222 fig.; *G. albicoxata* sp. nov. ♂ + ♀ Carin Cheba, Burma p. 209 fig.; *G. aorana* sp. nov. ♂ + ♀ Aor Id., China Sea p. 218 fig.; *G. aurispina* sp. nov. ♀ Shan States, Burma p. 221; *G. auro-maculata* sp. nov. ♂ + ♀ Hankau, China p. 225; *G. auroscutata* sp. nov. ♂ Taunggyi, Burma p. 207 fig.; *G. bella* sp. nov. ♂ + ♀ Pashok, Darjeeling, Nepal p. 203 fig.; *G. bengalica* sp. nov. ♀ Allahabad, Bengal p. 202 fig.; *G. biarmata* sp. nov. ♂ + ♀ Mt. Maquiling, Luzon, Philippine Is. p. 232; *G. bicolorispina* sp. nov. ♀ Port Cornwallis, N. Andamans p. 213 figs.; *G. borneoensis* sp. nov. ♀ Sampit, Borneo p. 216 fig.; *G. brunnea* sp. nov. ♀ Nilgris, Dekan p. 199; *G. buruana* sp. nov. ♂ + ♀ Buru Id., Dutch East Indies p. 219; *G. cana* sp. nov. ♀ Siam p. 220 fig.; *G. corrugata* sp. nov. ♀ Baram River, Borneo p. 217 fig.; *G. cuprintens* sp. nov. ♂ Shan States, Burma p. 221; *G. cyanatra* sp. nov. ♀ Darjeeling, Nepal p. 202 fig.; *G. delicatula* sp. nov. ♀ Mishumi Hills, Burma p. 210; *G. denticulatifrons* sp. nov. ♀ Finsch Coast, New Guinea p. 234; *G. feae conjugata* var. nov. ♂ Orissa, Bengal p. 204 fig.; *G. fokiensis* sp. nov. ♀ Fokien, China p. 224; *G. granoburnus* sp. nov. ♂ + ♀ Perak p. 212 fig.; *G. heinrichi* sp. nov. ♂ + ♀ Maymyo, Burma p. 210 fig.; *G. insulana* sp. nov. ♂ Aor Id., China Sea p. 220 fig.; *G. lateritia* sp. nov. ♀ Sampit, Borneo p. 217 fig.; *G. malabarica* sp. nov. ♂ + ♀ Malabar Coast, India p. 201 fig.; *G. marginata* sp. nov.

♀ Abor dist., Assam p. 204 fig.; *G. minuta* sp. nov. ♀ Darjeeling, Nepal p. 203 fig.; *G. niponica* sp. nov. ♂ Japan p. 226; *G. nigrescens* sp. nov. ♂ + ♀ Buru Id., Dutch East Indies p. 218; *G. ochroleuca* sp. nov. ♀ Taunggyi, Burma p. 222 fig.; *G. opaca* sp. nov. ♂ + ♀ Buru Id., Dutch East Indies p. 218; *G. promeana* sp. nov. ♀ Promé, Burma p. 209 figs.; *G. punctata* sp. nov. ♀ Tonkin, China p. 223; *G. quadrimaculata* sp. nov. ♀ Shan States, Burma p. 222 figs.; *G. quadriseriata* sp. nov. ♀ Rangoon, Burma p. 208 fig.; *G. rorida* sp. nov. ♀ Sampit, Burma p. 216 fig.; *G. rufa* sp. nov. ♀ Palnis Hills, Kodaikanal, Dekan p. 201; *G. sadona* sp. nov. ♂ + ♀ Sadon, Burma p. 207; *G. sampitia* sp. nov. ♂ Sampit, Borneo p. 216; *G. satarana* sp. nov. ♂ Satara dist., Dekan p. 200; *G. scutaurea* sp. nov. ♂ Dumaguete, Philippine Is. p. 230 figs.; *G. sherriffsi* sp. nov. ♂ + ♀ Hongkong, China p. 224 fig.; *G. sinensis* sp. nov. ♂ Hankau, China p. 225; *G. sulwana* sp. nov. ♂ Sulu Id., Philippine Is. p. 219; *G. sumba* sp. nov. ♀ Sumba Id., Dutch East Indies p. 214 fig.; *G. testacea* sp. nov. ♂ Nilgris, Dekan p. 201; *G. tricolor* sp. nov. ♂ + ♀ Maymyo, Burma p. 209 figs.; *G. turki* sp. nov. ♂ Tinnevely, Dekan p. 199; *G. victoria* sp. nov. ♂ Mt. Victoria, Burma p. 208; *G. viridalba* sp. nov. ♂ + ♀ Travancore, Dekan p. 200 fig.; *G. viridargentea* sp. nov. Shan States, Burma p. 221; *G. yodoensis* sp. nov. ♂ Yodo, Burma p. 211 fig.; *G. binotata* p. 211 fig.; *G. hainanensis* p. 220 fig.; *G. nobilis* p. 199 fig.; *G.* key to Indo-Australian species p. 187, ROEWER Senckenb. Biol. 35 1954.

Gagrellula aborana sp. nov. ♀ Abor Dist. p. 257; *G. albatra* sp. nov. ♂ + ♀ Fort de Kock, Sumatra p. 261 figs.; *G. auropunctata* sp. nov. ♀ Buru Is. p. 264 figs.; *G. bicolor* sp. nov. ♀ Travancore p. 263 fig.; *G. chamberlini* sp. nov. ♂ Dumaguete, Philippine Is. p. 270; *G. circulata* sp. nov. ♂ Fort de Kock, Sumatra p. 261 fig.; *G. conspersa* sp. nov. ♂ Idjen-Geb, Java p. 263; *G. convexa* sp. nov. ♀ Saigon, Indochina p. 266 fig.; *G. cuneimaculata* sp. nov. ♂ Tinnevely Distr., Dekan p. 255 fig.; *G. cuprilucens* sp. nov. ♂ + ♀ Shan States also Yado, Burma p. 265; *G. fasiata* sp. nov. ♀ Pahang p. 260 fig.; *G. frontalis* sp. nov. ♀ Palni Hills p. 255 fig.; *G. fuscana* sp. nov. ♂ + ♀

Hankau, China p. 268; *G. geminata* sp. nov. ♀ Kum Yan San, China p. 268 fig.; *G. gertschi* sp. nov. ♀ Cuernos Mts., Negros, Philippine Is. p. 269 figs.; *G. gilltayi* sp. nov. ♂ Simla p. 256; *G. heinrichi* sp. nov. ♂ + ♀ Mt. Popa, Burma p. 259; *G. johorea* sp. nov. ♂ Johore p. 260; *G. laeviscutum* sp. nov. ♀ Mt. Victoria, Burma p. 259; *G. leucanta* sp. nov. ♂ + ♀ Kum Yan San, China p. 269; *G. luteipalpis* sp. nov. ♂ + ♀ Pegu, Burma p. 259; *G. niveata* sp. nov. ♂ Carin Cheba, Burma p. 258; *G. opposita* sp. nov. ♂ Shan States p. 265 fig.; *G. orissa* sp. nov. ♂ Orissa p. 254 fig.; *G. palawana* sp. nov. ♂ + ♀ Palawan Is. p. 264; *G. rufifrons* sp. nov. ♂ + ♀ Kanara Dist., Dekan p. 255; *G. schenkeli* sp. nov. ♀ Matur, Sumatra p. 262; *G. simla* sp. nov. ♂ + ♀ Simla p. 256 fig.; *G. simplex* sp. nov. ♀ Shan States p. 266; *G. trichopalpis* sp. nov. ♂ Mt. Victoria, Burma p. 257; *G. albifrons* p. 262 fig.; *G. albitarsis* p. 261 fig.; *G. crux* p. 254 fig.; *G. niasensis* p. 263 fig.; *G. vittata* p. 256 fig.; *G. key* to species p. 250, ROEWER Senckenbergiana Biol. 35 1954.

Geraecormobius orguensis sp. nov. ♀ Parque Nacional da Serra dos Orgãos, Terezópolis, Rio de Janeiro, Brazil p. 492 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Gyas annulatus remarks p. 87 figs.; *G. titanus* p. 86 figs.; *G. sp.* nov. ? Aude, Gincle, France p. 91 figs.; *G. key* p. 85, DRESKO 227.

Heterogagrella gen. nov. [Gagrellaee] defined p. 281; type species *H. indica* sp. nov. ♂ Satara Dist., Dekan p. 282. ROEWER Senckenbergiana Biol. 35 1954.

Iguassuoides gen. nov. [Gonyleptidae: Pachylinae] type species *Iguassua lucida* Soares 1944, p. 268, SOARES & SOARES Arch. Zool. S. Paulo 8 1954.

Isaeolus gen. nov. [Phalangodidae: Phalangodinae] defined p. 66; type species *I. zilchi* sp. nov. ♂ San Vicente, El Salvador p. 66 fig., ROEWER Senckenb. Biol. 35 1954.

Ischyropsalis hispanum sp. nov. ♂ Sierra de Ancares, Spain p. 208 fig., ROEWER Abh. naturw. Ver. Bremen 33 1953.

Lacinius carpentieri sp. nov. ♂ + ♀ Spain p. 206 fig., ROEWER Abh. naturw. Ver. Bremen 33 1953.

Liobunum kohyai sp. nov. ♂ Kohyasan, Wakayama Pref., Japan p. 196 figs.; *L. montanum* sp. nov. ♂ Mt. Ishizuchi Ehime Pref., Japan p. 188 figs.; *L. platypenis* sp. nov. ♂ + ♀ Utsukushigahara; Kisofukushima, Naganano Pref. and Mt. Gassan, Yamagata Pref., Japan p. 192 figs.; *L. curvipalpi* ♂ + ♀ redescribed p. 176 figs.; *L. hiraiwai* ♂ + ♀ redescribed p. 181 figs., SUZAKI J. Sci. Hiroshima Univ. (Zool.) 14 1953.

Lygippulus gen. nov. [Assamiidae: Erecinae] defined p. 381; type species *L. major* sp. nov. ♂ + ♀ Tete, Mossambique p. 381; *L. parvulus* sp. nov. ♂ + ♀ Tete, Mossambique p. 382; *L. scaber* sp. nov. ♂ Tete, Mossambique p. 382, ROEWER Abh. naturw. Ver. Bremen 33 1954.

Mabwella trochanteralis sp. nov. locality not given ? Mossambique p. 379, ROEWER Abh. naturw. Ver. Bremen 33 1954.

Maromba gen. nov. [Gonyleptidae: Gonyleptinae] defined p. 498; type species *M. d'Andrettai* sp. nov. Maromba, Itatiaia, Rio de Janeiro, Brazil p. 498 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Megabunus diadema new to Wales p. 18, MURGATROYD 527.

Metagagrella aurofulgens sp. nov. ♀ Fr. Wilh. Hafen, New Guinea p. 250 fig.; *M. bengalensis* sp. nov. ♂ + ♀ Courtallam, Bengal p. 241 fig.; *M. bilineata* sp. nov. ♀ Darjeeling p. 242 fig.; *M. bimaculata* sp. nov. ♂ Tongking p. 246 fig.; *M. cingulata* sp. nov. ♀ Nilgiris, Dekan p. 240; *M. conspicua* sp. nov. ♂ Travancore p. 241 fig.; *M. cuprilucida* sp. nov. ♂ Kandy, Ceylon p. 242; *M. conjugata* sp. nov. ♂ Celebes p. 245 fig.; *M. granulata* sp. nov. ♂ + ♀ Borneo p. 246 fig.; *M. guttata* sp. nov. ♀ Simla, Himalayas p. 242 fig.; *M. mandalayia* sp. nov. ♀ Mandalay, Burma p. 244 fig.; *M. mysoreana* sp. nov. ♀ Mysore, Dekan p. 240 fig.; *M. octomaculata* sp. nov. ♀ Haipur, Behar, Upper India p. 240 figs.; *M. perakana* sp. nov. ♀ Perak p. 245; *M. rufa* sp. nov. ♀ Pashok, Sikkim p. 243 fig.; *M. satarensis* sp. nov. ♀ Satara Dist., Dekan p. 239 fig.; *M. sulcata* sp. nov. ♂ + ♀ Darjeeling p. 243 fig.; *M. suzuki* sp. nov. ♂ + ♀ Darjeeling p. 243 fig.; *M. tenuis* sp. nov. ♂ Pashok, Darjeeling

p. 243 fig.; *M. tongkingensis* sp. nov. ♂ + ♀ Tongking p. 246 fig.; *M.* key to species p. 237. ROEWER Senckenb. Biol. 35 1954.

Metapolydes trypsinivory sp. nov. ♂ Parque Nacional da Serra dos Órgãos, Teresópolis, Rio de Janeiro, Brazil p. 494 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Meteresa minuta sp. nov. ♂ Tete, Mosambique p. 380, ROEWER Abh. naturw. Ver. Bremen 33 1954.

Melerginus zilchi sp. nov. ♂ + ♀ El Salvador p. 69 fig., ROEWER Senckenb. Biol. 35 1954.

Metusarcoides marombaensis sp. nov. ♀ Maromba, Itaitia, Rio de Janeiro, Brazil p. 499 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Microminus soerenseni sp. nov. Corcovado, Rio de Janeiro, Brazil p. 503 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Mitostoma haasi sp. nov. ♂ Jerusalem, Israel p. 209 fig., ROEWER Abh. naturw. Ver. Bremen 33 1953.

Nemastoma quadripunctatum, biology and physiology p. 129 figs., LIECKE 373.

Neogagrella erimia p. 292 fig.; *N.* key to species p. 292, ROEWER 630.

Padangrella gen. nov. [Gagrellae] defined p. 281; type species *P. jacobsoni* sp. nov. ♂ - ♀ Padang, Sumatra p. 281 fig., ROEWER Senckenb. Biol. 35 1954.

Panagagrella bakeri sp. nov. = Cuernos Mt., Negros, Philippine Is. p. 280 fig.; *P. bicolor* sp. nov. ♂ - ♀ Idjen-Geb. Java p. 280 fig.; *P. palpalis* sp. nov. ♀ Perak p. 278 fig.; *P. mysorea* p. 278 fig.; *P. silerutiana* p. 280 fig.; *P.* key to species p. 277, ROEWER Senckenb. Biol. 35 1954.

Panatononcus simplicipes sp. nov. ♂ - ♀ El Salvador p. 71 fig., ROEWER Senckenb. Biol. 35 1954.

Pergagrella gen. nov. [Gagrellae] defined p. 290; type species *P. monticola* sp. nov. ♀ Simla, Himalaya p. 290 fig., ROEWER Senckenbergiana Biol. 35 1954.

Phalangium wahmani sp. nov. ♂ Aquas Belia, Israel p. 202 figs., ROEWER Abh. naturw. Ver. Bremen 33 1953.

Phalangodeliopsis gen. nov. [Phalangodidae: Tricommatinae] defined p. 507; type species *P. crassitibiae* sp. nov. Corcovado, Rio de Janeiro, Brazil p. 507 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Philora gen. nov. [Phalangodidae] defined p. 245; type species *P. turtlae* sp. nov. ♂ San Martin, Vera Cruz, Mexico p. 246 figs., GOODNIGHT & GOODNIGHT Trans. Amer. micr. Soc. 73 1954.

Progyndes roeweri sp. nov. ♂ Parque Nacional da Serra dos Órgãos, Teresópolis, Rio de Janeiro, Brazil p. 501 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954; *P. roeweri* nom. nov. pro *Gyadulus curvibialis* Roewer 1943. p. 292. SOARES & SOARES Arch. Zool. S. Paulo 8 1954.

Psychotrapus insulcatus sp. nov. ♂ + ♀ San Miguel, El Salvador p. 67, ROEWER Senckenb. Biol. 35 1954.

Resinthicus armatus sp. nov. ♂ + ♀ El Salvador p. 65 fig., ROEWER Senckenb. Biol. 35 1954.

Rhabdopygata gen. nov. [Assamiidae: Hypoxestinae] defined p. 378; type species *R. mossambica* sp. nov. ♀ Tete, Mosambique p. 378, ROEWER Abh. naturw. Ver. Bremen 33 1954.

Rhaphignathus dimidiatus sp. nov. ♂ + ♀ El Pozon, Provinz Falcon, Venezuela p. 55 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Sabacon franzi sp. nov. ♀ Sierra de Ancares, Spain p. 208 fig., ROEWER Abh. naturw. Ver. Bremen 33 1953.

Simonoleptes gen. nov. [Phalangodidae] defined p. 504; type species *S. latifemur* sp. nov. ♂ Corcovado, Rio Janeiro, Brazil p. 504 fig.; *S. oblecti-spiracula* sp. nov. Parque Nacional da Serra dos Órgãos, Teresópolis, Brazil p. 505 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Strandia granulata sp. nov. ♂ + ♀ Nilgiris, India p. 273 figs.; *S. javana* sp. nov. ♀ Djampang, Java p. 275 fig.; *S. leucobunus* sp. nov. ♂ Shan States p. 276 fig.; *S. moluccana* sp. nov. ♂ Halma-hera p. 276; *S. ochracea* sp. nov. ♀ Celebes p. 275; *S. orientalis* sp. nov. ♂ Singapore p. 274 fig.; *S. pahangia* sp. nov. ♀ Pahang p. 275 fig.; *S. perfecta* sp. nov. ♂ Shan States p. 276 fig.; *S.*

reunionis sp. nov. ♀ Réunion p. 274 fig.; *S.* key to species p. 270, ROEWER Senckenb. Biol. 35 1954.

Stygnomma bispinata ♀ described p. 347 fig., GOODNIGHT & GOODNIGHT 291.

Ubatubesiopsis gen. nov. [Gonyleptidae: Gonyleptinae] defined p. 495; type species *U. rabelloi* sp. nov. ♀ Boracéia, Salesópolis, São Paulo, Brazil p. 495 figs., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Uropachylus graciosus sp. nov. ♀ Parque Nacional da Serra dos Orgãos, Terezópolis, Rio de Janeiro, Brazil p. 502 fig., SOARES & SOARES Pap. Dep. Zool. Sec. Agric. S. Paulo 11 1954.

Zalandius bicornutus p. 502 fig., SOARES & SOARES 686.

ARANEAE

Katalog der Araneae, Lycosaeformia, Dionycha, Salticiformia, Cribellata, ROEWER 627.

Additions to county records.—Great Britain, COOKE 175; DUFFEY et al. 231; MURGATROYD 528.

Faunal lists.—Holland with keys and figures to species, CHRYSANTHUS 157; Pyrenees, DENIS 203, 204; Venezia, CAPORIACCO 138; Geisenheim, Germany, JACOBI 376; Newfoundland with biological notes, HACKMAN 312; Maritime drift lines, North Carolina, BARNES & BARNES 62; Wisconsin, LEVI & FIELD 458; Orb-weavers of the Chicago area with key to families, genera and species, LOWRIE 470; French Guiana, CAPORIACCO 139.

CTENIDAE key to African sub families p. 878, HYATT 367.

MASONINAE remarks with key to genera p. 12, TAMBS-LYCHE 715.

Acacesia pentagona sp. nov. ♀ Charvein, French Guiana p. 86 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Acantholycosa pyrenaea ♀ p. 108 fig., DENIS 203.

Acragas flavescens sp. nov. ♀ S. Jean du Maroni, French Guiana p. 156 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Aculepeira verae p. 448 figs., LEVI & FIELD 458.

Africactenus gen. nov. [Ctenidae: Acantheinae] defined p. 888; type species *Ctenus agilior* Pocock, ♀ described p. 888 fig.; *A. depressus* sp. nov. ♂ + ♀ River Ja, Cameroons p. 888 figs.; *A. desartsi* sp. nov. ♀ River Ja, Cameroons p. 889 fig.; *A. kribiensis* sp. nov. ♀ Kribi River, Cameroons p. 889 figs.; *A. pococki* sp. nov. ♂ Cameroons p. 889 figs.; *A. sandersoni* sp. nov. ♀ Mamfe-Eschobi, Cameroons p. 890 fig.; *A. simoni* sp. nov. ♀ Mamfe-Eschobi, Cameroons p. 890 fig.; *A. sladeni* sp. nov. ♀ Tinta Assumbo, Cameroons p. 890 fig.; *A. tridentatus* sp. nov. ♂ Mashonaland p. 891 figs.; *A. trilateralis* sp. nov. ♂ Mamfe-Eschobi, Cameroons p. 891 figs., HYATT Ann. Mag. nat. Hist. (12) 7 1954.

Agelena—*Agalena*, problem of nomenclature p. 329, BONNET 97.

Agelenopsis (*Barronopsis*) *floridensis* sp. nov. ♂ + ♀ Levy Co., Florida p. 3 figs.; *A. (B.) barrowsi* p. 3 figs.; *A. (B.) jeffersi* p. 5 fig.; *A. (B.) texana* p. 5 fig.; *A. (B.)* key to males p. 3, ROTH Amer. Mus. Novit. No. 1678 1954; *A. oklahoma* p. 454 figs., LEVI & FIELD 458.

Aglaoctenus guianensis sp. nov. ♀ Charvein, French Guiana p. 58, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Albionella chickeringi sp. nov. ♂ Charvein, French Guiana p. 153 fig.; *A. guianensis* sp. nov. ♀ S. Jean du Maroni: Charvein, French Guiana p. 151 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Alcmena trifasciata sp. nov. ♀ S. Jean du Maroni: Charvein, French Guiana p. 181 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Allohogna gen. nov. [Lycosidae] type species *Aranea singoriensis* Laxmann 1770 p. 212; included in gen. *Trochosa approximata* Cambridge 1885, *Lycosa singoriensis gobiensis* Schenkel 1936, *Trochosa sabulosa* Cambridge 1885, *Tarentula septembris* Strand 1906, *Lycosa signata* Lenz 1886, *Lycosa exculpta* L. Koch 1877, *Lycosa properipes* Simon 1909, *Trochosa pulchella* Thorell 1881, *Tarentula horrida* Keyserling 1876 p. 212, *Trochosa pictipes* Keyserling 1891, *Lycosa pratensis* Emerton 1885 p. 213, ROEWER Katalog der Araneae 2 1954.

Allotheridion fieldi p. 441 fig.; *A. zelotypum* p. 442 fig., LEVI & FIELD 458.

Allotrichosina gen. nov. [Lycosidae] type species *Lycosa managuanensis* Berland 1925 p. 213, ROEWER Katalog der Araneae 2 1954.

Alopecosa subhirsutella nom. nov. pro *Lycosa subhirsuta* L. Koch 1881 ♀ nec ♂ p. 221, ROEWER Katalog der Araneae 2 1954.

Alopecosella gen. nov. [Lycosidae] type species *Lycosa perspicax* L. Koch 1882 p. 225; included in gen. *Lycosa* pelusiaca Audouin 1827 p. 225, ROEWER Katalog der Araneae 2 1954.

Amphinecta dyali nom. nov. pro *A. sp. Dyal* 1942 p. 108, ROEWER Katalog der Araneae 2 1952.

Amycus effeminatus sp. nov. ♀ Charvein, French Guiana p. 154 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Anopliometes anastes sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 32 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Araeoncus meridionalis sp. nov. ♀ Touggourt, Hoggar, South Algeria p. 313 figs.; *A. hanno* p. 314 figs.; *A. key* to species p. 314, DENIS Bull. Soc. zool. Fr. 78 1954.

Araneus acacesiiiformis sp. nov. ♀ Oyapock, French Guiana p. 108 figs.; *A. eriophoroides* sp. nov. ♀ Charvein, French Guiana p. 111 figs.; *A. contestationis* sp. nov. ♀ Contesté Franco-Bréslien, French Guiana p. 105 figs.; *A. nigrocellatus* sp. nov. ♀ without locality p. 110 fig.; *A. trigonellus* sp. nov. ♀ Charvein, French Guiana p. 107 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954; *A. corticarius* p. 448 fig.; *A. gemmoides* p. 450 figs., LEVI & FIELD 458.

Araniella geayi sp. nov. ♀ Charvein, French Guiana p. 104 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Arctosa argentata p. 323 fig., DENIS 205.

Arctosippa gen. nov. [Lycosidae] type species *Diapontia gracilis* Keyserling 1882 p. 231; included in gen. *Lycosa* albugutulata L. Koch 1878 p. 231, ROEWER Katalog der Araneae 2 1954.

Arctosomma gen. nov. [Lycosidae] type species *Tarentula trochosiformis* Strand 1906 p. 231, ROEWER Katalog der Araneae 2 1954.

Argiope bruennichi in Belgium p. 131 figs., DUVIGNEAUD 234.

Argyneta caula p. 15 figs.; *A. decora* p. 15 figs., HACKMAN 312.

Ariamnes sinuatus sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 10 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Arkalosula gen. nov. [Lycosidae] type species *Arctosa sandae-rosae* Gertsch & Wallace 1935 p. 232; included in gen. *Arctosa* amylaceoides Schenkel 1936. *Hogna brevis* Denis 1953, *Lycosa chengta* Fox 1935, *Pirata garamantica* Caporiacco 1936 p. 231, *Trochosa albopellata* L. Koch 1875, *Arctosa frequentissima* Caporiacco 1947, *Tarentula picturata* Strand 1906, *Arctosa poeila* Caporiacco 1939, *Tarentula scopulitibius* Strand 1906, *Arctosa cheluncata* Petrunkevitch 1925, *Tarentula fusca* Keyserling 1876, *Lycosa inconspicua* Bryant 1948, *Arctosa panamana* Petrunkevitch 1925, *Pirata gigantea* Gertsch 1934 p. 232, ROEWER Katalog der Araneae 2 1954.

Artoriella gen. nov. [Lycosidae] type species *Artoria flavimanus* Simon 1909 p. 233; included in gen. *Artoria lycosimorpha* Strand 1909, *Artoria cingulipes* Simon 1909, *Lycosa maura* Urquhart 1891, *Artoria taenifera* Simon 1909 p. 233, ROEWER Katalog der Araneae 2 1954.

Artoriellula gen. nov. [Lycosidae] type species *Artoria bicolor* Simon p. 233, ROEWER Katalog der Araneae 2 1954.

Bathyphantes rufulus sp. nov. ♀ Fortune—Hermitage: ♂ Eddies Cove, St. Barbe, Newfoundland p. 13 figs.; *B. gracilis* p. 13 figs., HACKMAN Acta zool. fenn. 79 1954; *B. albocentris* p. 444 figs., LEVI & FIELD 458; *B. gracilis* new to Finland p. 24; *B. setiger* new Finland p. 24, HACKMAN 313.

Bonacosa gen. nov. [Lycosidae] type species *Trochosa meinerti* Thorell 1875 p. 237; included in gen. *Arctosa similis* Schenkel 1938 p. 237, ROEWER Katalog der Araneae 2 1954.

Breda furcifera sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 53 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Capidava variegata sp. nov. ♀ Akrou-ménge, Rive Gauche, French Guiana p. 173 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Carcinarachne brocki sp. nov. imported into Germany p. 405, SCHMIDT Z. angew. Ent. 36 1954.

Centromerus incilium ♂ p. 218 fig., DUFFEY & MILLIDGE 232.

Cherserigone gen. nov. [Erigonidae] type species *C. gracilipes* sp. nov. ♂ Région d'In Salah, Sahela Fouqania, Tidiket, South Algeria p. 321 figs., DENIS Bull. Soc. zool. Fr. 78 1954.

Chira portai sp. nov. ♀ S. Jean du Maroni, Oyapock, French Guiana p. 168 fig.; *C. luctuosa* p. 167, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Chorilycosa gen. nov. [Lycosidae] type species *Lycosa arorai* Dyal 1935 p. 237, ROEWER Katalog der Araneae 2 1954.

Chrysso maronica sp. nov. ♀ S. Jean du Maroni, French Guiana p. 74 figs.; *C. pentagona* sp. nov. ♀ Goudronville, French Guiana p. 75 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Cicurina arcuata p. 454 figs.; *C. itasca* p. 454 figs.; *C. lowriei* p. 454 figs., LEVI & FIELD 458.

Citilycosa gen. nov. [Lycosidae] type species *Lycosa hellenica* C. L. Koch 1836 p. 238; included in gen. *Trochosa dacica* Pavesi 1898 p. 238, ROEWER Katalog der Araneae 2 1954.

Clubiona chippewa p. 458 fig., LEVI & FIELD 458.

Collinsia palmeni sp. nov. ♀ Port au Port, St. Georges, Newfoundland p. 22 figs., HACKMAN Acta zool. fenn. 79 1954.

Conepeira glyphica p. 450 figs.; *C. mayo* p. 450 fig., LEVI & FIELD 458.

Conopistha acuminata sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 12 fig.; *C. pozonae* sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 11 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Coras lamellosus p. 454 figs., LEVI & FIELD 458.

Corinna lugubris sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 44 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Corythalia luctuosa sp. nov. ♂ Charvein, French Guiana p. 177 figs.; *C. variegata* sp. nov. ♂ Charvein, French Guiana p. 179 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Cryphoea montana p. 454 figs., LEVI & FIELD 458.

Ctenopsis stellata sp. nov. imported into Germany p. 406 figs., SCHMIDT Z. angew. Ent. 36 1954.

Ctenus auberti sp. nov. ♂ Maripa, Oyapock, French Guiana p. 123 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954; *C. falconensis* sp. nov. ♂ + ♀ El Pozon, Provinz Falcon, Venezuela p. 36 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953; *C. batesii* Pocock 1903 = *C. capulinus* (Karsch 1879) p. 877; *C. cavaticus* p. 881 fig.; *C. coccineipes* p. 881 fig.; *C. dirus* Thorell 1899 = *C. kingsleyi* F. O. Pickard-Cambridge 1898 p. 877; *C. hexastictus* p. 883 fig.; *C. marshalli* F. O. Pickard-Cambridge = *C. melanogastra* Bös. & Lenz 1895 p. 877; *C. pilosus* p. 885 figs.; *C. pulchriventris* p. 886 fig.; *C. rivulatus* p. 886 fig.; *C. spenceri* F. O. Pickard-Cambridge 1898 = *C. pulchriventris* Simon 1896 p. 877, HYATT 367.

Cydrellichus rosei sp. nov. ♂ Lourenço Marques, Mosambique p. 2 figs., BACELAR Arch. Mus. Bocage No. 24 1953.

Cyllodania fasciata sp. nov. ♀ S. Jean du Maroni, French Guiana p. 150 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Cyriocosmus elegans ♂ p. 3 fig., SCHENKEL 654.

Cyrtophora vachoni sp. nov. ♀ Charvein, French Guiana p. 82, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Dendryphantes coccineocinctus sp. nov. ♀ Maripa, French Guiana p. 187 fig.; *D. spinosissimus* sp. nov. ♀ Charvein, French Guiana p. 186 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954; *D. latior* nom. nov. pro *Metaphidippus latior* Chickering 1946 praecoce, *Attus latior* Walckenaer 1837, p. 1196, ROEWER Katalog der Araneae 2 1954.

Dichopne gen. nov. [Lycosidae] type species *Lycosa maritima* Karsch 1878 p. 239. *ROEWER Katalog der Araneae* 2 1954.

Dolomedes minor sp. nov. ♂ Tamanrasset, Alger. South Algeria p. 803 figs. *DENTS Bull. Soc. zool. Fr.* 73 1954; *D. chamberlini* nom. nov. pro *Dolomedes cognata* Chamberlin 1943 preocc. *Dolomedes cognata* Cambridge 1885, p. 1919; *D. jonesae* nom. nov. pro *D. minor* Jones 1943 preocc. *Collegium* 1943 p. 1822. *ROEWER Katalog der Araneae* 2 1954; *D. minor* p. 464 figs.; *D. chamberlini* p. 464 figs.; *D. maritima* p. 466 figs.. *LEVI & FIELD* 458.

Dolomedes occidentalis sp. nov. ♂ El Pozon, Provincia Falcon, Venezuela p. 43 fig. *SCHENKEL Verh. naturf. Ges. Basel* 64 1953.

Dolomedes hesperis p. 17 figs.. *HACKMAN* 312.

Lyngaea gen. nov. [Lycosidae] type species *Lycosa sinuata* 1868 p. 240; included in gen. *Lycosa* *genuata* L. Koch 1877. *Lycosa spinulosa* Hogg 1906. *Lyngaea thidi* Dahl 1908. *Lyngaea spinulosa* Hogg 1896. *Lycosa tridula* Simon 1905. *Lyngaea laevis* Chamberlin 1916. *Lycosa porteri* Simon 1904 p. 240. *ROEWER Katalog der Araneae* 2 1954.

Dinopis bucculentus sp. nov. ♂ + ♀ El Pozon, Provincia Falcon, Venezuela p. 8 fig. *SCHENKEL Verh. naturf. Ges. Basel* 64 1953.

Diplocephalus culminicola ♀ described p. 94 figs.. *DENTS* 203.

Dismodicus alticeps p. 28 figs.; *D. bifrons bifrons* p. 29 figs.; *D. bifrons decemmaculatus* p. 30 figs.. *HACKMAN* 312.

Dolomedes minoratus nom. nov. pro *D. minor* Banks 1898 preocc. L. Koch 1876 p. 133. *ROEWER Katalog der Araneae* 2 1954.

Dysdera atlantea sp. nov. ♀ Massif de l'Ayachi, Morocco p. 132. *DENTS Rev. franç. Entom.* 21 1954.

Edictonea gen. nov. [Lycosidae] type species *Lycosa edictonea* Simon 1910 p. 241. *ROEWER Katalog der Araneae* 2 1954.

Edictonea truncatus ♂ p. 23 fig. *SCHENKEL* 654.

Enelaeana congenera new to Britain p. 475 figs.. *DUFFY* 231.

Eperigone trilobita ♀ p. 20 figs.. *HACKMAN* 312.

Erigone aletris p. 19 fig.; *E. atra* p. 19 fig.; *E. blaesae* p. 19 fig.; *E. dentigera* p. 19 fig.; *E. ephala* p. 19 figs.; *E. ichmyperi* p. 19 fig.. *HACKMAN* 312; *E. vagans spinosa* gynandromorph p. 219 figs.. *KNÜLLE* 415; *E. arctica* p. 71 figs.; *E. atra* p. 90 figs.; *E. capra* p. 103 figs.; *E. dentipalpis* p. 94 figs.; *E. longipalpis* p. 79 figs.; *E. vagans* p. 97 figs.; Keys to species p. 104; *KNÜLLE* 418; *E. psychrophila* new to Iceland p. 222. *HYATT* 363.

Eucta kaestneri sp. nov. ♂ + ♀ Bellinchen, Central Germany p. 426 figs.; web construction, sex relations and post embryonic development p. 432; *E. caudicula* p. 427 figs.. *CROME Zool. Jb. Syst.* 82 1954.

Euryopsis coki sp. nov. ♂ Salt Lake City, Utah; ♀ Cokeville, Wyoming p. 33 figs.; *E. mulaiki* sp. nov. ♂ Kingsville, Texas; ♀ Arizona p. 19 figs.; *E. pepini* sp. nov. ♂ Pepin, Wisconsin p. 32 figs.; *E. spiritus* sp. nov. ♂ Phantom Canyon, Fremont Co., Colorado p. 46 figs.; *E. tavara* sp. nov. ♂ Lake Co., Florida p. 29 figs.; *E. bryantae* nom. nov. pro *Mufila texana* Bryant 1949 preocc. *Euryopsis texana* Banks 1903 p. 47; *E. argentea* p. 11 figs.; *E. californica* p. 39 figs.; *E. emertoni* p. 15 figs.; *E. flavomaculata* p. 7 figs.; *E. formosa* p. 40 figs.; *E. gertschi* p. 9 figs.; *E. limbata* p. 26 figs.; *E. lineatipes* p. 36 figs.; *E. nigripes* p. 24 figs.; *E. quinque-maculata* p. 46 figs.; *E. saukea* p. 7 figs.; *E. scriptipes* p. 43 figs.; *E. spinigera* p. 20 figs.; *E. texana* p. 34 figs.; *E. variabilis* p. 23 figs.; *E.* gen. reviewed p. 3. *LEVI Amer. Mus. Novit.* No. 1666 1954; *E. euterpe* sp. nov. ♀ Tougourt, Hoggar, South Algeria p. 341 figs.. *DENTS Bull. Soc. zool. Fr.* 73 1954; *E. giordanii* sp. nov. ♂ Alberoni, Venezia, Italy p. 125 figs.. *CAPORIACCO Boll. Soc. venez. Stor. nat.* 5 1950; *E. saukea* p. 442 figs.. *LEVI & FIELD* 458.

Eurygelma californicum, nervous system, musculature and segmentation of cephalothorax p. 14 figs.. *FIRSTMAN* 282.

Eustonea gen. nov. [Argiopidae: Mangorini] defined p. 94; type species *E. adonotata* sp. nov. ♂ Charvein, French Guiana p. 95 figs.. *CAPORIACCO Comm. pontif. Acad. Sci.* 16 1954.

Eustala albicans sp. nov. ♀ Charvein, French Guiana p. 88 fig.; *E. lunulifera* ♂ p. 90 fig.; *E. tridentata* ♂ + ♀ p. 92 figs., CAPORACCO Comm. pontif. Acad. Sci. 16 1954; *E. wiedenmeyeri* sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 21 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Eustiromastix guianae sp. nov. ♂ Charvein, French Guiana p. 176 figs., CAPORACCO Comm. pontif. Acad. Sci. 16 1954.

Evippa kronebergi nom. nov. pro *Lycosa aculeata* Kroneberg 1875 praeocc. Sundevall 1832 p. 154, ROEWER Katalog der Araneae 2 1954.

Evippomma gen. nov. [Lycosidae] type species *Evippa cristata* Simon 1910 p. 155; included in gen. *Pardosa evippiformis* Caporiacco 1935 and *Pardosa evippina* Simon 1897 p. 155, ROEWER Katalog der Araneae 2 1954.

Falconia gen. nov. [Heteropodidae] defined p. 46; type species *F. melloi* sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 46 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Flacilloides gen. nov. [Salticidae] type species *F. antineae* sp. nov. ♂ Tamarrasset, Ahaggar, South Algeria p. 319 figs., DENIS Bull. Soc. zool. Fr. 78 1954.

Freya disparipes sp. nov. ♂ S. Jean du Maroni, French Guiana p. 171 figs.; *F. decorata* p. 169 figs., CAPORACCO Comm. pontif. Acad. Sci. 16 1954.

Galapagosa gen. nov. [Lycosidae] type species *Lycosa albamariensis* Banks 1902 p. 241, ROEWER Katalog der Araneae 2 1954.

Gea wiedenmeyeri sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 17 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953; *G. heptagon* p. 448 figs., LEVI & FIELD 458.

Gelanor ornatus sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 29 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Geolycosa missouriensis p. 455 figs., LEVI & FIELD 458.

Gephyra viridipallida sp. nov. imported into Germany p. 405, SCHMIDT Z. angew. Ent. 36 1954.

Gongylidium tuberosum p. 30 fig., HACKMAN 312.

Habrocestum dyali nom. nov. pro *H. rubroclypeatum* Dyal 1935 praeocc. Lessert 1927 p. 1119, ROEWER Katalog der Araneae 2 1954.

Hapalopus guianensis sp. nov. ♂ Oyapock, Moutaquouère and Galoupa, French Guiana p. 49 figs., CAPORACCO Comm. pontif. Acad. Sci. 16 1954; *H. formosus* ♂ p. 1 fig., SCHENKEL 654.

Haplodrassus bicornis p. 458 figs., LEVI & FIELD 458.

Heliophanus semipullatus sp. nov. ♂ + ♀ Lac d'Arratille, Hautes-Pyrénées p. 90 figs., DENIS Bull. Soc. Hist. nat. Toulouse 88 1953.

Hilaira algida sp. nov. ♀ La Poile, Burges, Newfoundland p. 25 figs.; *H. aquilonia* sp. nov. ♀ Stanford River, St. Barbe, Newfoundland p. 27 figs.; *H. dubia* sp. nov. ♀ Stanford River, St. Barbe, Newfoundland p. 26 figs.; *H. mentasta* p. 22 figs., HACKMAN Acta zool. fenn. 79 1954.

Hoggicosa gen. nov. [Lycosidae] type species *Lycosa errans* Hogg 1905 p. 247; included in gen. *Tarentula subamylacea* Bösenberg & Strand 1906, *Lycosa atlantica* Marx 1889 p. 247, ROEWER Katalog der Araneae 2 1954.

Hogna vachoni sp. nov. ♀ Goudronville, French Guiana p. 62 fig.; *H. ventrilineata* sp. nov. ♂ + ♀ Charvein, French Guiana p. 64 fig., CAPORACCO Comm. pontif. Acad. Sci. 16 1954; *H. antiquiana* nom. nov. pro *Tarentula beckeri* Keyserling 1878 praeocc. Thorell 1875 p. 254; *H. inhambania* nom. nov. pro *Lycosa tarentulina* Karsch 1878 nec Audouin 1826, ROEWER Katalog der Araneae 2 1954.

Homoeomma alcirae sp. nov. ♂ Salinas Chicas, Buenos Aires, Argentina p. 420 figs., PIKELIN & SCHIAPELLI Physis 20 1954.

Hyltonia gen. nov. [Prodidomidae] defined p. 13; type species *H. scottae* sp. nov. ♂ Posadas, Misiones, Argentina p. 13 figs., BIRABÉN Neotropica 1 1954.

Icius fontanus p. 462 figs., LEVI & FIELD 458.

Ildibaha inermis sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 28 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Ishicosa gen. nov. [Lycosidae] type species *Tarentula ishikariana* Saito 1934 p. 261; included in gen. *Tarentula* *teranganicola* Strand 1911 p. 261, ROEWER Katalog der Araneae 2 1954.

Isoctenus latevittatus sp. nov. ♂ Charvein, French Guiana p. 125, CAPORACCO Comm. pontif. Acad. Sci. 16 1954; *I. sigma* sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 35 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Isoghna gen. nov. [Lycosidae] type species *Lycosa maderiana* Walckenaer 1837 p. 261; included in gen. *Lycosa* *dimota* Simon 1909, *Lycosa likelikeae* Simon 1900, *Lycosa amnophila* Wallace 1942, *Lycosa angusta* Tullgren 1901, *Lycosa episima* Chamberlin 1924, *Lycosa ericeticola* Wallace 1942, *Lycosa longitarsis* F. Cambridge 1902, *Lycosa maasi* Gertsch & Wallace 1937, *Lycosa miami* Wallace 1942, *Lycosa osceola* Gertsch & Wallace 1937, *Lycosa securifer* Tullgren 1905, *Lycosa snodgrassi* Banks 1902, *Schizocosa duplex* Chamberlin 1925 p. 262, *Lycosa lenta* Hentz 1844, *Lycosa punctulata* Hentz 1844, *Schizocosa salsa* Barnes 1953, *Lycosa tigana* Gertsch & Wallace 1935, *Lycosa timuqua* Wallace 1942 p. 263, ROEWER Katalog der Araneae 2 1954.

Jacobia brauni sp. nov. imported into Germany p. 407, SCHMIDT Z. angew. Ent. 36 1954.

Jollecosa gen. nov. [Lycosidae] type species *Lycosa jollensis* Schendel 1951 p. 263, ROEWER Katalog der Araneae 2 1954.

Latrodectus mactans mexicanus subsp. nov. ♀ + ♂ Mexico p. 455 fig., GONZÁLEZ An. Inst. Biol. Univ. Méx. 24 (1953) 1954; *L. pallidus* subsp. *pavlovskii* subsp. nov. ♂ + ♀ Kara Bogaza, Turkmenia p. 481 figs., CHARITONOV Zool. Zh. 33 1954; *L. geometricus*, distribution, life history, natural control, venom p. 52 fig.; *L. mactans* p. 52 fig., BAERG 50; *L. mactans* in Uruguay p. 351, WITKIND 802; *L. mactans*, appearance in New England p. 192, KASTON 400.

Leanella gen. nov. [Lycosidae] type species *Trochosa intricata* C. L. Koch 1848 p. 264; included in gen. *Lycosa* *tridens* Simon 1937, *Lycosa leaniiformis* Simon 1915 p. 264, ROEWER Katalog der Araneae 2 1954.

Leptyphantes coiffaili sp. nov. ♂ Arudy, vallon de Molarode, Basses-Pyrénées p. 264 figs., DENIS Bull. Soc. Hist. nat. Toulouse 88 1953; *L. meillonae* sp. nov. ♀ "Artiguète," Vallée du Marcadau, Hautes Pyrénées p. 104 figs.; *L. johannis-lupi* sp. nov. ♂ + ♀ Chapeau d'Espagne, Haute-Pyrénées p. 102 figs.; *L. pyrenaeus* sp. nov. ♂ + ♀ Hourquette d'Aussou, Haute-Pyrénées p. 103 figs., DENIS Bull. Soc. Hist. nat. Toulouse 88 1953; *L. furcata* p. 444 figs.; *L. subalpina* p. 446 figs., LEVI & FIELD 458; *L. triramus* p. 11 figs., HACKMAN 312.

Leucauge fagei sp. nov. ♀ Charvein: S. Jean du Maroni: Oyapock, French Guiana p. 70 fig., CAPORACCO Comm. pontif. Acad. Sci. 16 1954; *L. magnifica* sp. nov. ♀ Mt. Katsuragi, Osaka; ♂ Abitsugawa, Wakayama, Japan p. 2 figs.; *L. blanda* p. 2 figs.; *L. subblanda* p. 2 figs.; *L. subgemea* p. 2 figs., YAGI-NUMA Arachnol. News, Osaka No. 2. 1954; *L. formosa* subsp. *pozona* subsp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 14 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Loxosceles laeta p. 351 fig., WITKIND 802.

Lurio splendidissimus sp. nov. ♂ S. Jean du Maroni, French Guiana p. 188 fig., CAPORACCO Comm. pontif. Acad. Sci. 16 1954.

Lycosa falconensis sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 33 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953; *L. houssabeni* nom. nov. pro *L. houssa* Strand 1913 ♀ forma Ft. Beni p. 179; *L. (s. str.) intermediaris* nom. nov. pro *Lycosa (Tarentula) intermedia* Caporiacco 1928 praecoc. Bösenberg 1903 p. 268, ROEWER Katalog der Araneae 2 1954; *L. taxonomy* of *L. monticola* group, key to ♂♂, figures of *L. agrestis*, *L. arenicola*, *L. monticola*, *L. palustris*, and *L. purbeckensis* p. 68 figs., KNÜLLE 413.

Lycosula gen. nov. [Lycosidae] type species *Lycosella thorelli* Berland 1929 p. 277, included in gen. *Lycosella* *hebridisiana* Berland 1938, *Lycosella minima* Berland 1938 p. 277, ROEWER Katalog der Araneae 2 1954.

Lynxosa gen. nov. [Lycosidae] type species *Lycosa inexorabilis* Cambridge 1869 p. 277; included in gen. *Tarentula*

orotawensis Strand 1915, *Pardosa sowerbyi* Hogg 1912, *Tarentula hibernalis* Strand 1906, *Arctosa tantilla* Bryant 1948, *Tarentula yauliensis* Strand 1908 p. 277, ROEWER Katalog der Araneae 2 1954.

Lyssomanes minor sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 49 fig.; *L. wiedenmeyeri* sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 47 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953; *L. longipes* p. 146 fig., CAPORIACCO 139.

Mago barbatus sp. nov. ♀ Oyapock, French Guiana p. 16 fig.; *M. budoninus* sp. nov. ♂ + ♀ S. Jean au Maroni: Charvein: Maripa-Oyapock, French Guiana p. 158 figs.; *M. fulvithorax* sp. nov. ♀ Contesté Franco-Bréslien p. 162 fig.; *M. longidens* p. 161 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Mangora candida sp. nov. ♂ Barro Colorado, Id., ♀ Forest Reserve, Panama Canal Zone p. 198 figs.; *M. montana* sp. nov. ♂ + ♀ El Volcan, R.P., Panama p. 204 figs.; *M. schneirlai* sp. nov. ♀ Barro Colorado Id., Canal Zone, Panama p. 209 fig.; *M. bimaculata* p. 197 figs.; *M. mobilis* redescribed p. 202 figs.; *M. pia* redescribed p. 208 figs.; *M. spinula* redescribed p. 211 figs.; *M. trilineata* p. 213 figs.; *M. key* to Panama species p. 196, CHICKERING Bull. Mus. comp. Zool. Harv. 111 1954; *M. falconae* sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 19 fig.; *M. pozonae* sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 20 fig.; *M. wiedenmeyeri* sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 18 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Mastophora pickeli subsp. *occidentalis* subsp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 29, SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Medmassa septentrionalis sp. nov. ♀ Charvein, French Guiana p. 116, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Meioneta nr. *rurestris* p. 15 figs., HACKMAN 312.

Melloa gen. nov. [Aviculariidae] defined p. 3; type species *M. gracilis* sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 4 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Melloicosa gen. nov. [Lycosidae] type species *Gnatholycosa vittata* Mello-Leitão 1945 p. 278, ROEWER Katalog der Araneae 2 1954.

Menemerus acostae sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 50 fig.; *M. falconensis* sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 49 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Mesilla anyphaenoides sp. nov. ♀ Charvein, French Guiana p. 121 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Meta berlandi sp. nov. ♀ Charvein, French Guiana p. 80 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Metacyrba taeniola p. 462 figs., LEVI & FIELD 458.

Metagonia auberti sp. nov. ♂ Oyapock & Moutaguouère, French Guiana p. 55 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Metepeira beunneiceps sp. nov. ♀ Charvein, French Guiana p. 102 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954; *M. wiedenmeyeri* sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 22 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Methesis brevitarsus sp. nov. ♂ + ♀ Charvein, French Guiana p. 117 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Metatrochosina gen. nov. [Lycosidae] type species *Tarentula vulvella* Strand 1907 p. 278; included in gen. *Lycosa lucasi* Roewer 1951 p. 278, ROEWER Katalog der Araneae 2 1954.

Miagrammopes auriventer sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 7 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Micrepeira gen. nov. [Argiopidae] defined p. 26; type species *M. albo-maculata* sp. nov. ♀ El Pozon Provinz Falcon, Venezuela p. 27 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Micromaso gen. nov. [Micyrphantidae: Masoninae] defined p. 11; type species *M. flavus* sp. nov. ♂ Grytviken, South Georgia p. 11 fig., TAMBS-LYCHE 715.

Microneta complicata p. 446 figs., LEVI & FIELD 458.

Mimohogna gen. nov. [Lycosidae] type species *Lycosa pachana* Pocock 1898 p. 279; included in gen. *Lycosa vultuosa* C. L. Koch 1839; *Tarentula arapensis* Strand 1908 p. 379, ROEWER Katalog der Araneae 2 1954.

Misumena maronica sp. nov. ♀ Charvein: S. Jean du Maroni, French Guiana p. 139 fig., CAPORIACCO Comm. pontif. Acad. Sci. 15 1954.

Mithion gridellii p. 138 fig., CAPORIACCO 138.

Molitorosa gen. nov. [Lycosidae] type species *Lycosa molitor* Bertkau 1880 p. 279, ROEWER Katalog der Araneae 2 1954.

Mustelicos gen. nov. [Lycosidae] type species *Trochosa dimidiata* Thorell 1875 p. 279; included in gen. *Tarentula* *opiphez* Wagner 1891, *Lycosa ordosa* Hogg 1912 p. 279, *Lycosa goyderi* Hickman 1944 p. 280, ROEWER Katalog der Araneae 2 1954.

Myrmarachne laurentina sp. nov. ♂ Lourenço Marques, Mosambique p. 8 figs., BACELAR Arch. Mus. Bocage No. 24 1953.

Nagina modesta sp. nov. ♀ Charvein, French Guiana p. 192 fig., CAPORIACCO Comm. pontif. Acad. Sci. 15 1954.

Neoxyphinus gen. nov. [Oonopidae] defined p. 453; type species *N. ogloblini* sp. nov. ♀ + ♂ Loreto, Misiones, Argentina p. 454 figs., BIRABÉN Physis 20 1954.

Nodocion melanie p. 458 figs., LEVI & FIELD 458.

Noegus patellaris sp. nov. ♂ Oyapock, French Guiana p. 164 figs., CAPORIACCO Comm. pontif. Acad. Sci. 15 1954.

Notiomaso australis ♂ + ♀ redescribed p. 6 figs., TAMBS-LYCHE 715.

Odontoruncinia gen. nov. [Thomisidae: Thomisinae] defined p. 142; type species *O. vittata* sp. nov. ♀ Charvein, French Guiana p. 142 figs., CAPORIACCO Comm. pontif. Acad. Sci. 15 1954.

Oecobius annulipes redescribed p. 21 fig.; *O. annulipes maculatus* redescribed p. 24 fig.; *O. putus* redescribed p. 19 fig.; *O. templi* redescribed p. 16 fig.; *O.* key to Egyptian species p. 15, HASSAN 322.

Olios acostae sp. nov. ♂ + ♀ juv. El Pozon, Provinz Falcon, Venezuela

p. 41 fig.; *O. pollexensis* sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 41 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Orthocosa gen. nov. [Lycosidae] type species *Lycosa semicincta* L. Koch 1877 p. 281; included in gen. *Arctosa ambigua* Denis 1947, *Tarentula orophila* Thorell 1887 p. 281, ROEWER Katalog der Araneae 2 1954.

Oxyopes maripae sp. nov. ♀ Maripa, French Guiana p. 67 fig.; *O. maripae* sp. nov. ♂ Goudronville, French Guiana p. 68 fig., CAPORIACCO Comm. pontif. Acad. Sci. 15 1954; *O. taeniatulus* nom. nov. pro *Oxyopes taeniatulus* Mello-Leitão 1949 praecoc. Thorell 1879 p. 333, ROEWER Katalog der Araneae 2 1954.

Oxyptila laevis sp. nov. ♀ Massif de l'Ayachi, Morocco p. 134 figs., DENIS Rev. franç. Entom. 21 1954; *O. modesta* p. 461 figs., LEVI & FIELD 458.

Pachygnatha dorothea p. 452 figs.; *P. kurati* p. 452 fig., LEVI & FIELD 458.

Paratrochosina gen. nov. [Lycosidae] type species *Lycosa insolita* L. Koch 1878 p. 282; included in gen. *Lycosa sagittigera* Roewer 1951, *Trochosina arctosaeformis* Caporacco 1949, *Alopecosa amica* Mello-Leitão 1941, *Alopecosa murina* Mello-Leitão 1941 p. 282, ROEWER Katalog der Araneae 2 1954.

Pardosa reagleri lagunaris subsp. nov. ♂ + ♀ Motte di Volpego, Venezia, Italy p. 121 figs., CAPORIACCO Bull. Soc. venez. Stor. nat. 5 1950; *P. fuscata* p. 456 figs.; *P. groenlandica* p. 456 figs., LEVI & FIELD 458.

Pardosops gen. nov. [Lycosidae] type species *Lycosa pusilla* Thorell 1875 p. 196; included in gen. *Lycosa altatula* Roewer 1951, *Lycosa condania* Cambridge 1885, *Lycosa fortunata* Cambridge 1885 p. 196, *Lycosa haffli* Odenvall 1901, *Lycosa marosa* L. Koch 1879, *Lycosa parvula* Cambridge 1885, *Lycosa rida* Odenvall 1901, *Lycosa subordinatula* Strand 1915, *Pardosa tenuipes* L. Koch 1882 not Dahl 1908, *Lycosa turkestanica* Roewer 1951, *Pardosa venatica* L. Koch 1882, *Pardosa elegans* Kulczyński 1901; *Lycosa tesquorum* Odenvall 1901 p. 197, *Trabea bidentigera* Strand 1906, *Pardosa lepreousti* Mello-Leitão 1947, *Aulonia aurantica* Emerton 1885, *Lycosa imparidula* nom. nov. pro *Lycosa imparidula* Thorell

1877 praeocc. Walckenaer 1837 p. 198, ROEWER Katalog der Araneae 2 1954.

Pavocosa gen. nov. [Lycosidae] type species *Lycosa gallopavo* Mello-Leitão 1941 p. 282; included in gen. *Lycosa* *siamensis* Giebel 1863, *Tarentula feisica* Strand 1914, *Lycosa herteli* Mello-Leitão 1947, *Schizocosa langei* Mello-Leitão 1947 p. 282, ROEWER Katalog der Araneae 2 1954.

Pelecopsis partitus sp. nov. ♀ Cirque des Escoubous, Montvalier, Ariège, Pyrenées p. 261 figs., DENIS Bull. Soc. Hist. nat. Toulouse 88 1953.

Perimaso gen. nov. [Micerophantidae: Mazoninae] defined p. 9; type species *P. grytvikensis* sp. nov. ♀ Grytviken, South Georgia p. 9 fig., TAMBS-LYCHE 715.

Phiale albovitata sp. nov. ♂ El Pozon, Provinz Falcon, Venezuela p. 51 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Phidippus triangulifer sp. nov. ♀ Le Moutt, French Guiana p. 184 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954; *P. altanus* p. 464 figs.; *P. apacheanus* p. 464 figs., LEVI & FIELD 458.

Philae psecadiformis p. 166 fig., CAPORIACCO 139.

Philodromus foucauldi sp. nov. ♀ Tamanrasset, Ahaggar, South Algeria p. 318 fig., DENIS Bull. Soc. zool. Fr. 78 1954; *P. collinus* new to Britain p. 474 figs., DUFFEY 231; *P. oneida* p. 461 figs., LEVI & FIELD 458.

Phoneutria colombiana sp. nov. imported into Germany p. 406; *P. boliviensis* p. 414 fig.; *P. fera* p. 419 fig., SCHMIDT Z. angew. Ent. 36 1954.

Physocychus simoni new to Switzerland p. 22, COMELLINI 169.

Piratessa gen. nov. [Lycosidae] type species *Tarentula dybowski* Kulezynski 1885 p. 286; included in gen. *Pirata* *minuta* Emerton 1885 p. 286, *Pirata marxi* Stone 1890 p. 287, ROEWER Katalog der Araneae 2 1954.

Piratula gen. nov. [Lycosidae] type species *Lycosa hygrophila* Thorell 1872 p. 287; included in gen. *Tarentula* *clercki* Bösenberg & Strand 1906, *Pirata eugeni* Roewer 1951, p. 287; *Aranea knorrii* Scopoli 1763, *Lycosa latitans* Blackwall 1841, *Tarentula piratoides* Bösenberg & Strand 1906, *Pirata*

praedo Kulezynski 1885, *Tarentula pro-curva* Bösenberg & Strand 1906, *Tarentula subpiraticus* Bösenberg & Strand 1906, *Pirata chamberlini* Lessert 1927 p. 288; *Lycosa kempi* Gravely 1924, *Pirata gertschi* Chamberlin & Ivie 1944, *Tarentula piratimorpha* Strand 1908, *Pirata sedentaria* Montgomery 1904, *Pirata seminola* Gertsch & Wallace 1935 p. 289, ROEWER Katalog der Araneae 2 1954.

Poecilochroa montana p. 458 figs., LEVI & FIELD 458.

Porrhomma gertschi sp. nov. ♂ + ♀ Deer Lake, Humber, Newfoundland p. 31 figs., HACKMAN Acta zool. fenn. 79 1954.

Porrimula gen. nov. [Lycosidae] type species *Porrima callipoda* Mello-Leitão 1933 p. 313, ROEWER Katalog der Araneae 2 1954.

Pozonia gen. nov. [Argiopidae] defined p. 24; type species *P. cornuta* sp. nov. juv. El Pozon, Provinz Falcon, Venezuela p. 25 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Praestigia gen. nov. [Linyphiidae] defined p. 253; type species *P. duffeyi* sp. nov. ♂ + ♀ Havergate Id., Suffolk, p. 254 figs., MILLIDGE Ann. Mag. nat. Hist. (12) 7 1954.

Pseudidiops siolii sp. nov. Belém, Pará, Brazil p. 125 figs., BÜCHERL Mem. Inst. Butantan 25 1953.

Pseudopartona gen. nov. [Salticidae: Rhenini] defined p. 183; type species *P. ornata* sp. nov. ♂ S. Jean du Maroni, French Guiana p. 183 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Pseudoparianthis megalopalpus sp. nov. ♂ Bas Oyapock, French Guiana p. 127 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Psilochorus minimus sp. nov. imported into Germany p. 403, SCHMIDT Z. angew. Ent. 36 1954.

Pterartoriola gen. nov. [Lycosidae] type species *Pterartoria sagae* Purcell 1903 p. 290; *Pterartoria caldaria* Purcell 1903, *Lycosa lativittata* Purcell 1903 p. 289, *Pterartoria subcrucifera* Purcell 1903, *Trochosa lompopattangi* Merian 1911 p. 290, ROEWER Katalog der Araneae 2 1954.

Pterotricha sinoniae sp. nov. ♂ Isola di Zannone, Italy p. 61, CAPORIACCO in

CAPORIACCO & DENIS Boll. Zool. 20 1953.

Rabidosa gen. nov. [Lycosidae] type species *Lycosa rabida* Walckenaer 1837 p. 290, ROEWER Katalog der Araneae 2 1954.

Rhomphaea simplex sp. nov. ♀ Uanary, French Guiana p. 72 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Ringina gen. nov. [Linyphiidae: Linyphiinae] defined p. 17; type species *R. crozetensis* sp. nov. ♀ Possession Id., Crozet Is. p. 17 fig., TAMBS-LYCHE Sci. Res. Norweg. Antarct. Exped. 1927-1928 et sqq. No. 35 1954.

Runcinioides nigromaculatus p. 140 figs., CAPORIACCO 139.

Saitocosa gen. nov. [Lycosidae] type species *Tarentula flavitibia* Saito 1934 p. 290, ROEWER Katalog der Araneae 2 1954.

Sassacus aemulus p. 464 figs.; *S. papenhoei* p. 464 figs., LEVI & FIELD 458.

Scaptocosa sangilia nom. nov. pro *Lycosa inornata* Mello-Leitão 1941 (in fig. *Pardosa tristis*) (praeocc. Blackwall 1862, Giebel 1863, L. Koch 1877; *tristis* praeocc. Keyserling 1887) p. 292, ROEWER Katalog der Araneae 2 1954.

Scotinella madisonia p. 459 fig.; *S. manitou* p. 459 figs.; *S. minnelonka* p. 459 figs., LEVI & FIELD 458.

Scotolathys alticola sp. nov. ♀ Massif de l'Ayachi, Morocco p. 135 figs., DENIS Rev. franç. Entom. 21 1954.

Scotophaeus loricatus p. 458 figs., LEVI & FIELD 458; *S. mauckneri* sp. nov. imported into Germany p. 403, SCHMIDT Z. angew. Ent. 36 1954.

Selenops aureolus sp. nov. ♀ Iguazú, Misiones, Argentina p. 107 figs.; *S. mazzai* sp. nov. ♀ Salta, Argentina p. 110 fig.; *S. punctatus* sp. nov. ♀ Eldorado, Misiones, Argentina p. 112 fig.; *S. argentinus* ♂ + ♀ p. 105 figs.; *S. hebraicus* ♂ allotype described p. 109 figs., BIRABÉN Miss. Estud. Patol. reg. Argent. 24 1953; *S. rōwieri* nom. nov. pro *S. montanus* Caporiacco 1947 praeocc. Lawrence 1940 p. 449, CAPORIACCO Comm. Pont. Acad. Scient. 13 6 1949 [Omitted from Z.R. 1949 No. 97]; *S. longipedata* nom. nov. pro *Selenops longipes* Lawrence 1940 praeocc. Petrunkevitch 1930 p. 734; *S.*

rōwieri Caporiacco 1949 (recte *roewieri*) p. 736; *S. columbianus* nom. nov. pro *S. aculeatus* Mello-Leitão 1941 praeocc. Simon 1901 p. 738, ROEWER Katalog der Araneae 2 1954; *S. spizii*? ♀ p. 40 fig., SCHENKEL 654.

Senoculus (Stenoctenus) wiedenmeyeri sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 34 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Sillus furciger sp. nov. ♂ Maripa, ♀ Goudronville, French Guiana p. 119 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Siloca septentrionalis sp. nov. ♂ S. Jean du Maroni, French Guiana p. 191 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Sitticus cursor p. 464 figs., LEVI & FIELD 458; *S. semivittatus* p. 91 figs., DENIS 203.

Solicosa gen. nov. [Lycosidae] type species *Tarentula solitaria* Herman 1879 p. 295; included in gen. *Tarentula* *strandi* Rosca 1936, *Tarentula teschleri* Kolosvary 1934 p. 295; *Lycosa andesina* Berland 1913 p. 296, ROEWER Katalog der Araneae 2 1954.

Sosippinus gen. nov. [Lycosidae] type species *Sosippus californicus* Simon 1898 p. 313; included in gen. *Sosippus* *pragmaticus* Chamberlin 1924, *Sosippus minus* Chamberlin 1924 p. 313; ROEWER Katalog der Araneae 2 1954.

Spermophora lingua sp. nov. imported into Germany p. 403, SCHMIDT Z. angew. Ent. 36 1954.

Spirembolus oreinoides p. 27 figs., HACKMAN 312.

Staberius lemoulti sp. nov. ♂ + ♀ Le Moul: Charvein, French Guiana p. 56 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Stichoplastus ravidus ♂ p. 2 fig., SCHENKEL 654.

Stothis astuta ♂ p. 5 fig., SCHENKEL 654.

Subedricus gen. nov. [Argiopidae: Cyclosini] defined p. 84; type species *Araneus nigropustulatus* O. P.-Cambridge 1893 p. 84, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Synaema maculato vittatus sp. nov. ♀ Goudronville: ♂ Unananay, French Guiana p. 144 figs., CAPORIACCO Comm.

pontif. Acad. Sci. 16 1954; *S. trimaculosum* sp. nov. imported into Germany p. 405, SCHMIDT Z. angew. Ent. 36 1954.

Syrisca fasciata sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 45 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Tama occidentalis sp. nov. ♀ El Pozon, Provinz Falcon, Venezuela p. 9 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Tapinauchenius gigas sp. nov. ♀ Saint Jean du Maroni, French Guiana p. 50, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954; *T. latipes* ♂ p. 5 fig., SCHENKEL 654.

Tapinocyba exigua sp. nov. ♀ Millertown Junction, Grand Falls, Newfoundland p. 17 figs.; *T. lindrothi* sp. nov. ♀ Port au Port, St. George, Newfoundland p. 16 figs.; *T. scopulifera* p. 18 figs., HACKMAN Acta zool. fenn. 79 1954.

Tegenaria domestica, question of use p. 79, BONNET 95.

Tetragnatha harrodi p. 452 fig., LEVI & FIELD 458; *T. tenuissima* ♀? p. 13 fig., SCHENKEL 654.

Tetrallycosa gen. nov. [Lycosidae] type species *Lycosa meracula* Simon 1909 p. 296, ROEWER Katalog der Araneae 2 1954.

Tetractosa gen. nov. [Lycosidae] type species *Tarentula brevispina* Kulczynski 1908 p. 296; included in gen. *Lycosa subcoelestis* Fox 1935 p. 296, ROEWER Katalog der Araneae 2 1954.

Textrix crassivulva sp. nov. ♀ Argħ-balon de l'Orika, Haut Atlas, Morocco p. 142 fig.; *T. instabilis* sp. nov. ♂ + ♀ Massif de l'Ayachi, Morocco p. 138 figs.; *T. parva* sp. nov. ♀ Région de Taza, Ras-el-Ma, Morocco p. 143 fig.; *T. subfasciata* p. 141 fig.; *T. variegata* p. 137 figs.; Review of Moroccan species p. 136, DENTS Rev. franç. Entom. 21 1954.

Thaumasia benoisti sp. nov. ♀ Oya-pock and Montaquouère, French Guiana p. 59 fig., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Theratoscirtus affinis sp. nov. ♂ Charvein, French Guiana p. 174 figs., CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Theridion denticulatum musivium subsp. nov. imported into Germany p. 404, *T. pseudogibberosum* sp. nov. imported into Germany p. 410, SCHMIDT Z. angew. Ent. 36 1954; *T. aurantium* p. 444 figs.; *T. marmoratum* p. 444 fig.; *T. puritanum* p. 444 fig.; *T. secpunctatum* p. 444 figs., LEVI & FIELD 458; *T. petraeum* p. 481 figs., WIEHLE & FRANZ 794.

Theridiotis gen. nov. [Theridiidae] defined p. 178; type species *Dipoena jocosu* Gertsch & Davis 1936 ♂ + ♀ redescribed p. 180 figs.; *T. barrowi* sp. nov. ♂ Brooksville, Hernando Co., Florida: ♀ Las Ruinas de Palenque, Chiapas, Mexico p. 187 figs.; *T. chirica* sp. nov. ♂ + ♀ Rustlers Camp, Chiricahua Mts.; Cochise Co., Arizona p. 184 figs.; *T. goodnightorum* sp. nov. ♂ Rio San Gregorio, Chipas, Mexico: ♀ Atoyac, Veracruz, Mexico p. 186 figs.; *T. tonala* sp. nov. ♂ + ♀ Tonalá, Chiapas, Mexico p. 185 figs.; *T. wagneri* sp. nov. ♂ Popantla, Veracruz, Mexico p. 188 figs.; *T. minuscula* ♂ + ♀ redescribed p. 182 figs.; *T. probabilis* ♀ redescribed p. 187 figs., LEVI Trans. Amer. micr. Soc. 73 1954.

Theridula casas sp. nov. ♂ + ♀ Las Casas, Chiapas, Mexico p. 338 figs.; *T. emertoni* sp. nov. ♂ + ♀ Ramsey, Bergen Co., New Jersey p. 333 figs.; *T. pueblo* sp. nov. ♂ + ♀ Villa Juárez, Puebla, Mexico p. 338 figs.; *T. faceta* p. 337 figs.; *T. gonygaster* p. 340 figs.; *T. opulenta* p. 334 figs., LEVI Trans. Amer. micr. Soc. 73 1954.

Thiodina branickii p. 147 fig.; *T. pallida* p. 149 fig., CAPORIACCO 139.

Tibellus oblongus maculatus subsp. nov. ♂ Alberoni, Venezia p. 135 fig., CAPORIACCO Boll. Soc. venez. Stor. nat. 5 1950.

Tidarren incertissimum sp. nov. ♀ S. Jean du Maroni, French Guiana p. 77 figs.; *T. fordum luctuosum* subsp. nov. ♀ S. Jean du Maroni, French Guiana p. 77, CAPORIACCO Comm. pontif. Acad. Sci. 16 1954.

Tmarus candefactus sp. nov. ♀ S. Jean du Maroni, French Guiana p. 134 figs.; *T. geayi* sp. nov. ♀ Oya-pock, French Guiana p. 132 fig.; *T. histrix* sp. nov. ♀ S. Jean du Maroni; ♂ Charvein, French Guiana p. 135 figs.; *T. oberus* ♂ p. 137 fig., CAPORIACCO Comm. pontif.

Acad. Sci. 15 1954; *T. wiedenmeyeri* sp. nov. ♀ El Pozon Provinz Falcon, Venezuela p. 30 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Tobias albovittatus sp. nov. ♀ S. Jean du Maroni: Charvein, French Guiana p. 131; *T. trituberculatus* ♀ p. 129 fig., CAPORACCO Comm. pontif. Acad. Sci. 16 1954.

Torania scutata p. 216 fig.; *T. variata* p. 213 figs.; *T. occidentalis* p. 216 all imported into Great Britain, BROWNING 120.

Trabaeosa gen. nov. [Lycosidae] type species *Trabaea heteroculata* Strand 1913 p. 297; included in gen. *Trabaea nigriceps* Purcell 1903, *Trabaea purcelli* Roewer 1951, *Trabaea rubriceps* Lawrence 1952, *Trabaea unicolor* Purcell 1903, *Trabaea varia* Purcell 1903, *Trabaea australiensis* L. Koch 1877, *Trabaea lineata* L. Koch 1877 p. 297, ROEWER Katalog der Araneae 2 1954.

Triccosta gen. nov. [Lycosidae] type species *Tarentula japonica* Bösenberg & Strand 1906 p. 298; included in gen. *Tricca kansuensis* Schenkel 1936, *Lycosa lucorum* L. Koch 1877, *Tricca strandi* Caporiacco 1940, *Lycosa phegeia* Simon 1909, *Trochosa humicola* Bertkau 1880 p. 298, ROEWER Katalog der Araneae 2 1954.

Trichoncus patrizii sp. nov. ♀ Isola di Zannone, Italy p. 62 fig., CAPORACCO in CAPORACCO & DENIS Bull. Zool. 20 1953.

Trochosippa gen. nov. [Lycosidae] type species *Lycosa meruensis* Lessert 1926 p. 303; included in gen. *Lycosa eugeni* Roewer 1951, *Tarentula pardosella* Strand 1906, *Lycosa malayana* Doleschall 1859, *Alopecosa anomala* Mello-Leitão 1945, *Alopecosa minor* Mello-Leitão 1941, *Alopecosa obscura* Mello-Leitão 1943, *Lycosa ohlini* Tullgren 1901 p. 303, ROEWER Katalog der Araneae 2 1954.

Trochosomma gen. nov. [Lycosidae] type species *Trochosa annulipes* L. Koch 1875 p. 304; included in gen. *Lycosa versicula* Karsch 1880 p. 304, ROEWER Katalog der Araneae 2 1954.

Trochosula gen. nov. [Lycosidae] type species *Lycosa conspersa* L. Koch 1882 p. 304; included in gen. *Lycosa ipsa* Karsch 1879, *Lycosa lacernata* Karsch 1879, *Trochosa grazianii* Caporiacco

1939, *Lycosa candicans* L. Koch 1876, *Lycosa tristicula* L. Koch 1877, *Lycosa luctuosa* Mello-Leitão 1947 p. 304, ROEWER Katalog der Araneae 2 1954.

Tutelina iridea sp. nov. ♀ S. Jean du Maroni, French Guiana p. 180, CAPORACCO Comm. pontif. Acad. Sci. 16 1954.

Typhochraestus alticola sp. nov. ♂ Pic de Bernat Barrau, Hautes Pyrénées p. 96 figs., DENIS Bull. Soc. Hist. nat. Toulouse 83 1953.

Uloborus plumosus sp. nov. imported into Germany p. 404, SCHMIDT Z. angew. Ent. 36 1954.

Varacosa hickmani nom. nov. pro *Lycosa fletcheri* Hickman 1944 praecoc. Gravely 1924 p. 305, ROEWER Katalog der Araneae 2 1954.

Venatrix gen. nov. [Lycosidae] type species *Venator fusca* Hogg 1900 p. 307, ROEWER Katalog der Araneae 2 1954.

Verrucosa septemammata sp. nov. ♀ Charvein, French Guiana p. 100 fig., CAPORACCO Comm. pontif. Acad. Sci. 16 1954.

Wagneriana jelskii ♀ p. 97 fig.; *W. spinosa* ♀ p. 98 figs., CAPORACCO 139.

? *Wagneriana turrigera* sp. nov. juv. El Pozon, Provinz Falcon, Venezuela p. 24 fig., SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Wiedenmeyeria gen. nov. [Ctenidae] defined p. 39; type species *W. falconensis* sp. nov. ♂ juv. + ♀ juv. El Pozon, Provinz Falcon, Venezuela p. 39, SCHENKEL Verh. naturf. Ges. Basel 64 1953.

Xysticus lutulentus p. 461 figs., LEVI & FIELD 458.

Zelotes caporiaccoi sp. nov. ♂ + ♀ Isola di Zannone, Italy p. 59 figs., DENIS in CAPORACCO & DENIS Boll. Zool. 20 1953; *Z. meinsohni* sp. nov. ♀ Massif de l'Ayachi, Morocco p. 133 fig., DENIS Rev. franç. Entom. 21 1954; *Z. remyi* sp. nov. ♂ + ♀ Inzaouène, Ahaggar, South Algeria p. 315 figs., DENIS Bull. Soc. zool. Fr. 78 1954.

Zygiella montana p. 452 figs., LEVI & FIELD 458.

ACARI

Revision of C. J. Neuman Hydrach., LUNDBLAD 473.

Faunal list (excl. Ixod.).—Jan Mayen, MACADYEN 478; Hydrach. of Belgium, COOREMAN 182; Limburg, Holland, NESBITT 536; Oribatids from Åkshult-mire, Sweden, TARRAS-WAHLBERG 717; Austria, FRANZ 270; Hydrach., Lake Balaton, Austria, SZALAY 710; Belbidae of Holstein, Germany, STRENZKE 705; Hydrach. of Bremer streams, Germany, VIETS & VIETS 768; Hamburg, Germany, WEIDNER 786; Hydrach. of Corsica, ANGELIER 26.

Faunal list (Ixod.).—Skopl'e, Macedonia, ANGELOVSKI 28; Domestic animals of Turkey, MIMOGLU 507; Afghanistan, ANASTOS 11; Anglo-Egyptian Sudan, HOOGSTRAAL 356; New African records, HOOGSTRAAL 358; Belgian Congo, Ruanda Urundi, Angola and Northern Rhodesia, THEILER & ROBINSON 725; Ruanda-Urundi and Belgian Congo, VAERENBERGH 754; Mosambique, DIAS 214; Chile, DONOSA 222; Venezuela, biology, distribution and hosts, VOGELSANG & DIAS 772; Additions to Venezuela, biology, distribution and hosts, VOGELSANG & DIAS 773.

ANALGESOIDEA new classification and systematic position, DUBININ 228.

ANISITSIELLINAE key to genera p. 455, LUNDBLAD 472.

APOLONINAE key to genera of larvae from the Asiatic-Pacific region p. 108, WOMERSLEY 808.

ATURINAE key to South American genera p. 570, LUNDBLAD 472.

AXONOPSINAE key to South American genera p. 564, LUNDBLAD 472.

BDELLOIDEA superfam. nov. [Trombidiformes] p. 73, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

BELBIDOIDEA superfam. nov. [Aptyetima] p. 71, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

CAMISIOIDEA superfam. nov. [Aptyetima] p. 71, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

CARABODOIDEA superfam. nov. [Aptyetima] p. 71, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

C[AL]ECULOIDEA superfam. nov. [Trombidiformes] p. 73, DUBININ Bull. Acad. U.R.S.S. ser. Biol. 1954.

CANESTRINIIDAE in Oudemans' collection, COOREMAN 183.

CHEYLETIDAE list of known African species p. 72, LAWRENCE 441.

CHEYLETOIDEA superfam. nov. [Trombidiformes] p. 73, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

CHYZERIINI tribe nov. [Trombellinae] defined p. 125, WOMERSLEY Rec. S. Aust. Mus. 11 1954.

ERIOPHYIDAE, considerations of the characters p. 117, ANDRÉ 13; Yorkshire, England, GILMOUR 288.

GUSTAVIDOIDEA superfam. nov. [Aptyetima] p. 71, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

HERMANNIELLO[IDEA] superfam. nov. [Aptyetima] p. 71, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

HYDRACARINA List of North American species with bibliography p. 29, MITCHELL 509.

IXODIDAE key to genera and species of Madeira, DIAS 209; faunal list from Ruanda-Urundi, Central Africa, DIAS 217; From vertebrates in Pyrénées-Orientales, THÉODORIDÈS 726.

LIMNESIINAE key to genera p. 488, LUNDBLAD 472.

MYOBIIDAE key to genera p. 240, RADFORD 588.

NEMATALYCIDAE fam. nov. Trombidiformes p. 645, STRENZKE Vie et Milieu 4 1954.

NEOMAMERSIDAE fam. nov. [Hydriphanta] defined p. 447, LUNDBLAD Ark. Zool. N.S. 5 1954.

NEOMAMERSINAE subfam. nov. [Neomamersidae] p. 447, LUNDBLAD Ark. Zool. N.S. 5 1954.

ORIBATES regression of the famulus in the Belbids p. 482, GRANDJEAN 298; Classification, natural grouping and division into families p. 421, GRANDJEAN 300.

PALAEACAROIDES general characters, classification p. 180, GRANDJEAN 302.

PEDICULOCHELOIDEA superfam. nov. [Ptyctims] p. 71, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

PHYTOSEIINAE key to genera p. 170, WOMERSLEY 804.

PSEUDOCHEYLIDAE list of known African species p. 76, LAWRENCE 441.

PSEUDOCHEYLOIDEA superfam. nov. [Trombidiformes] p. 72, DUBININ Bull. Acad. U.R.S.S. ser. biol. 1954.

PTERYGOSOM[O]IDEA superfam. nov. [Trombidiformes] p. 72, DUBININ Bull. Acad. U.R.S.S. biol. ser. 1954.

TARSONEMIDAE revision of species of Western hemisphere, historical account, systematic relationships, external morphology, terminology, distribution, bionomics, collection and preparation, key to genera, key to ♀♀, list of synonyms p. 1091, BEER 67.

THINOSEIINAE subfam. nov. defined p. 115, EVANS Ann. Mag. nat. Hist. (12) 7 1954.

TORRENTICOLIDAE key to South American genera and species p. 476, LUNDBLAD 472.

TROMBELLINAE key to tribes and genera p. 125, WOMERSLEY 807.

TROMBELLINI tribe nov. [Trombellinae] defined p. 125, WOMERSLEY Rec. S. Aust. Mus. 11 1954.

TROMBICULIDAE Taxonomy of larvae; suggested standard measurements for nymphs and adults; provisional definition of taxonomic units, AUDY 42; key to species of Southern Korea p. 111, JAMESON & TOSHIOKA 381; Revision of Japanese species with keys to genera, subgenera and species p. 247, SASA & JAMESON 646; Key to species from Hokkaido, Japan p. 341, SASA & OGATA 647.

TYDE[O]IDEA superfam. nov. [Trombidiformes] = Eupodoidea Banks 1915 p. 72, DUBININ Bull. Acad. U.R.S.S. biol. ser. 1954.

TYRELLINAE key to South American species p. 493, LUNDBLAD 472.

Acantholimnesia gen. nov. [Limnesiidae: Limnesiinae] defined p. 122; type species *A. millepora* sp. nov. ♂ + ♀ Rio Cururú, Mission: Kenebiit-taibiri, Amazonas p. 122 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Acaphylla indiae sp. nov. ♀ off *Thea sinensis* (Ternstroemiaceae), Cinna-mara, Assam p. 126 figs., KEIFER Bull. Dept. Agric. Calif. 43 1954.

Acarapis woodi, embryology and histology p. 407 figs., KLUMPP 412.

Acarocheilopodia gen. nov. [Halaricidae: Simognathinae] defined p. 285;

type species *A. delamarei* sp. nov. ♂ North of Mataro, Spain: Sitges, Barcelona, Spain: Fregene, Fiumicino, Italy p. 285 figs., ANGELIER Vie et Milieu 4 (1953) 1954.

Acaronychus trågårdhi redescribed p. 214 figs., GRANDJEAN 302.

Aceria acnisti sp. nov. ♀ off *Acnistus cauliflorus* (Solanaceae), Ouro Preto, Minas Gerais, Brazil p. 66 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953; *A. allenrolfeae* sp. nov. ♀ off *Allenrolfea occidentalis* (Chenopodiaceae), Wheeler Ridge, California p. 67 figs.; *A. caliberberis* sp. nov. ♀ off *Berberis californica* (Berberidaceae), San Diego Co., California p. 66 figs.; *A. eriodictyonis* sp. nov. ♀ off *Eriodictyon crassifolium* (Hydrophyllaceae), Los Angeles Co., California p. 67 figs.; *A. paradianthi* sp. nov. ♀ off *Dianthus* sp. (Caryophyllaceae), Goleta, California p. 65 figs.; *A. rosas-costae* sp. nov. ♀ off *Acacia carenia* (Leguminosae), La Lajuela, Chile p. 66 figs.; *A. tradescantiae* sp. nov. ♀ off *Tradescantia* sp. (Commelinaceae), College Park, Maryland p. 66 figs., KEIFER Bull. Dept. Agric. Calif. 41 1952; *A. neobeavori* sp. nov. ♀ off *Juglans californica* (Juglandaceae), Los Angeles, California p. 148 figs.; *A. parthenii* sp. nov. ♀ off *Parthenium argentatum* (Compositae), Salinas, California p. 147 figs., KEIFER Bull. Dept. Agric. Calif. 41 1952; *A. sheldoni* p. 2 figs., MARTINO 490.

Acherontacarus rutilans new to Corsica p. 511 figs.; *A. vietsi* new to Corsica p. 509 figs., ANGELIER 26.

Achipteria fanzagoi nom. nov. pro *Oribates nicoletii* Berlese 1885 non Berlese 1885 p. 419, JACOT Trans. Amer. micr. Soc. 43 1929. [Omitted from Z.R. 1930 No. 152.]

Acomatacarus arabicus sp. nov. larva off gecko, *Stenodactylus pulcher*, Ho-deida, Yemen p. 306 fig., RADFORD Fieldiana, Zool. 34 1954; *A. bakeri* sp. nov. larva off *Peromyscus truei gratus*, Pedregal de San Angel, Mexico p. 31 figs.; *A. hirsuta* p. 33 fig., HOFFMANN Ciencia 11 1951; *A. brevicarcal* sp. nov. larva off Pocket mouse, *Perognathus californicus*, Hastings Reservation, Monterey Co., California p. 156 figs., *A. linsdalei* sp. nov. larva off Pocket mouse, *Perognathus californicus*, Hastings Reservation, Monterey Co., Cali-

fornia, also off *Citellus beecheyi*, off *Perognathus parvus* and off *Perognathus formosus* p. 160 figs., BRENNAN & JONES Wasmann J. Biol. 12 1954; *A. yosanoi* sp. nov. larva off *Rattus rattus* spp., Oro-kie lakelet, Shiitori Shrine, Miyake-jima Id., Japan p. 19 figs., FUKUZUMI & OBATA Kitasato Arch. exp. Med. 26 1953; *A. yosanoi* redescribed p. 250 fig., SASA & JAMESON 646.

Actacarus pygmaeus new to Pyrénées-Orientales, Algeria and Spain p. 281 figs., ANGELIER 25.

Actinacarus gen. nov. [Axonopsidae] defined p. 560; type species *A. cardioporus* sp. nov. ♀ Manchique, Colombia p. 560 figs.; *A. affinis* sp. nov. ♀ Coconuco, Colombia p. 562 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Edoplophora glomerata redescribed p. 312 figs., GRANDJEAN 295.

Afromyobia gen. nov. [Myobiidae] defined p. 241; type species *Myobia trouessarti* Poppe 1896 p. 241 figs., RADFORD Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Aleurodamaeus gen. nov. [Belbidae] type species *Damaeus setosus* Berlese 1883 p. 205, GRANDJEAN Bull. Mus. Hist. nat. Paris (2) 26 1954.

Alichorhagia fragilis new to Britain p. 806, EVANS 247.

Allocaeculus catalanus sp. nov. Gerona, Catalonia, Spain and Eastern Pyrenees, France p. 2 figs., FRANZ Bonn. zool. Beitr. 5 1954.

Allodermanyssus sanguineus, life cycle p. 236, FULLER 274a.

Allogalumna longiphumus subsp. *confuentina* subsp. nov. Glocknergruppe, S.W.-Hang, Austria p. 513 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Allothrombium minutum sp. nov. Prostějov, Austria p. 240 fig., WILLMANN Českoslov. parasit. 1 1954; *A. tuberculatum* sp. nov. Gesäuse, Austria p. 491 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Amblyomma beaurepairei sp. nov. ♂ + ♀ off *Tatus novecinctum* [Edent.: Mamm.], Turiamo, Aragua, Venezuela p. 39 figs.; *A. calcaratum venezuelense* subsp. nov. ♂ + ♀ off *Tamandua tetradactyla* (hairy anteater), Piritu, Guárico, Venezuela p. 32 figs.; *A. maculatum* p.

21 fig.; *A. nodosum* redescribed p. 27 figs., VOGELSSANG & DIAS Rev. Med. vet. Caracas 12 1953; *A. beccari* Tonelli Rondelli 1939 and *A. latepunctatum* Tonelli Rondelli 1937 = *A. scalpturatum* Neumann 1899 p. 488; *A. brimonti* Neumann 1913 = *A. humerale* Koch 1844 p. 490; *A. curruca* Schulze 1936 = *A. parvum* Aragão 1908 p. 489; *A. deminutivum* Neumann 1899 = variation of *A. dissimile* Koch 1844 p. 489; *A. myrmecophegium* Schulze 1935 = *A. brasiliense* var. *guianensis* Floch & Abonnenc 1940 p. 488; *A. nigrum* Tonelli Rondelli 1939 = *A. paccae* Aragão 1911 p. 490; *A. tapiri* Tonelli Rondelli 1937 and *A. finitimum* Tonelli Rondelli 1937 = *A. cajennense* Fabr. 1787 p. 486; *A. tasqueti* Floch & Abonnenc 1940 = *A. romitii* Tonelli Rondelli 1939 p. 488, ARAGÃO & FONSECA 31; *A. hebraeum* teratology p. 2251 figs.; *A. nuttalli* teratology p. 2257 figs.; *A. tholloni* teratology p. 2259 figs.; *A. variegatum variegatum* teratology p. 2261 figs.; *A. v. gouvrensis* teratology p. 2261 figs., DIAS 210; *A. multipunctum* ♀ described, ♂ redescribed p. 493 figs., FONSECA & ARAGÃO 266; *A. ovale* ♂ + ♀ new to Venezuela p. 70 figs., VOGELSSANG & DIAS 773; *A. poematum* ♂ + ♀ redescribed p. 123 figs.; *A. faiai* = *A. poematum* p. 128 fig., DIAS 219.

Amblyseius obtusus new to Australia p. 188 fig.; key to species p. 190, WOMERSLEY 804.

Androlaelaps sinuosa sp. nov. ♀ + ♂ off *Perognathus* sp., Pigeon Pass, Riverside Co., California p. 120 figs.; *A.* key to American species p. 119, FURMAN Pan.-Pacific Ent. 30 1954; *A. thesae* p. 163 figs., COOREMAN 176.

Anisitsiellides monticolus ♀ described p. 454 figs., LUNDBLAD 472.

Anocentor columbianus Schulze 1937 = *A. nitens* (Neumann 1897) p. 499; *A. nitens* new host, jaguar, *Panthera onca*, Brazil p. 499, ARAGÃO & FONSECA 32.

Anomalaspis Brennan 1952 synonym of *Tecomatlana* Hoffmann 1947, p. 121, WOMERSLEY 809.

Anychus schultzei p. 241 figs.; *A. vergani* p. 243 figs., VERGANI 762.

Aphelacarus acarinus redescribed, variation p. 226 figs.; *A. aphidinus* p. 239 fig., GRANDJEAN 302.

Arctoseiopsis gen. nov. defined p. 796; type species *Seius minutus* Halbert 1915, redescribed p. 797 figs., EVANS Proc. zool. Soc. Lond. 123 1954.

Arctoseius limburgensis sp. nov. ♀ off *Agaricus campester*, Cavern, Neercanne. Limburg, Holland p. 20 figs., NESBITT Natuurh. Maandbl. 43 1954; *A. bispinatus* new to Britain p. 794; *A. halophilus* new to Britain p. 794, EVANS 247; *A. (A.) ? pratensis* Hirschmann NOM. NUD. p. 350, FRANZ in Spiegel Land-Tierwelt 1 1954.

Argas reflexus new to Kenya p. 89 figs., HEISCH 328.

Arrenurus (s. str.) *bleptopetiolatus* sp. nov. ♂ Crooked Lake, Barry Co., Michigan p. 48 figs.; *A. (s. str.) drepanophorus* sp. nov. ♂ Nichols' Bog, Cheboygan Co., Michigan p. 51 figs.; *A. (s. str.) fissicorniformis* sp. nov. ♂ Wall Lake, Barry Co., Michigan p. 50 figs.; *A. (s. str.) gennadus* sp. nov. ♂ Black River, Cheboygan Co., Michigan p. 54 figs.; *A. (s. str.) hungerfordi* sp. nov. ♂ Pellston Clay Pools, Emmet Co., Michigan p. 52 figs.; *A. (s. str.) maryellenae* sp. nov. ♂ Wall Lake, Barry Co., Michigan p. 57 figs.; *A. (s. str.) neosuperior* sp. nov. ♂ Nichols' Bog, Cheboygan Co., Michigan p. 56 figs.; *A. (s. str.) pinguissimus* sp. nov. ♂ Wall Lake, Barry Co., Michigan p. 44 figs.; *A. (s. str.) pseudosuperior* sp. nov. ♂ Wall Lake, Barry Co., Michigan p. 55 figs.; *A. (s. str.) wallensis* sp. nov. ♂ Wall Lake, Barry Co., Michigan p. 57 figs.; *A. (s. str.) amplius* p. 56 fig.; *A. (s. str.) americanus* p. 53 fig.; *A. (s. str.) americanus mucronatus* p. 55 fig.; *A. (s. str.) compactilis* p. 51 fig.; *A. (s. str.) fissicornis* p. 46 figs.; *A. (s. str.) flabellifer* p. 53 fig.; *A. (s. str.) laticornis* p. 51 fig.; *A. (s. str.) lautus* p. 51 figs.; *A. (s. str.) magnicaudatus* p. 56 fig.; *A. (s. str.) major* p. 53 fig.; *A. (s. str.) planus* p. 44 fig.; *A. (s. str.) platyrotundo-cuspidator* p. 57 figs.; *A. (s. str.) pleopetiolatus* p. 53 fig.; *A. (s. str.) pollicitus* p. 53 fig.; *A. (s. str.) reflexus* p. 50 fig.; *A. (s. str.) superior* p. 55 figs.; *A. (s. str.)* key to males in Michigan p. 41; *A.* key to subgenera based on males p. 41, Cook Trans. Amer. micr. Soc. 73 1954; *A. (Megaluracarus) bartonensis* sp. nov. ♂ Barton Pond, Wash-tensaw Co., Michigan p. 378 figs.; *A. (M.) dinotoformis* sp. nov. ♂ Big Star

Lake, Lake Co., Michigan p. 379 figs.; *A. (M.) neobirgei* sp. nov. ♂ Wall Lake, Barry Co., Michigan p. 377 figs.; *A. (M.) neomamillanus* sp. nov. ♂ Livingston Co., Michigan p. 370 figs.; *A. (M.) apetioliatus* p. 369 figs.; *A. (M.) birgei* p. 378 figs.; *A. (M.) cardiacus* p. 374 fig.; *A. (M.) cornicularis* p. 369 fig.; *A. (M.) longicaudatus* p. 372 figs.; *A. (M.) manubriator* p. 377 fig.; *A. (M.) marshallae* p. 369 fig.; *A. (M.) megalurus megalurus* p. 370 fig.; *A. (M.) megalurus intermedius* p. 370; *A. (M.) morrisoni* p. 377 figs.; *A. (M.) pseudocaudatus* p. 374 figs.; *A. (M.) pseudoconicus* p. 377 fig.; *A. (M.) pseudocylindratus* p. 374 fig.; *A. (M.) rectangularis* p. 376 fig.; *A. (M.) rotundus* p. 379 figs.; *A. (M.) scutuliiformis* p. 377 fig.; *A. (M.) semicircularis* p. 372 figs.; *A. (M.) solifer* p. 376; *A. (M.) wardi* p. 376 fig., Cook Trans. Amer. micr. Sci. 73 1954; *A. lacus* sp. nov. ♂ + N, Wainui-o-mata Reservoir, New Zealand p. 446 figs.; *A. rotoensis* sp. nov. ♂ + ♀ + N, Maramau lagoon, South Wairarapa: near Waikawa River; Ohariu Valley New Zealand p. 439 figs., STOUT Trans. roy. Soc. N.Z. 81 1953; *A. (s. str.) mediterraneus* sp. nov. ♂ Ciudad Rodrigo, Spain p. 159; *A. (s. str.) rodrigenis* sp. nov. ♂ Ciudad Rodrigo, Spain p. 158; *A. (s. str.) szalayi* sp. nov. ♂ Odivelas, Portugal p. 158, LUNDBLAD Zool. Anz. 153 1954; *A. (Micruracarus) pygmaeus* sp. nov. ♂ + ♀ Canalli, Bonifacio, Corsico p. 146 figs., ANGELIER Vie et Milieu 5 1954; *A. (Megaluracarus) tamboensis* sp. nov. ♂ + ♀ El Tambo, Colombia p. 573 figs.; *A. (?) s. str.) imperator* var. *goliath* var. nov. ♀ El Tambo, Colombia p. 575 figs., LUNDBLAD Ark. Zool. N.S. 5 1954; *A. (Arrenurus) sellatus* sp. nov. ♂ Montevideo, Santa Lucia, Tümpel, Uruguay p. 156 figs.; *A. (Megaluracarus) adullerinus* sp. nov. ♂ Dutch Guiana p. 159 figs.; *A. (M.) bisinuus* sp. nov. ♂ + ♀ Dutch Guiana p. 161 figs.; *A. (M.) inchoatus* sp. nov. ♂ Pernambuco, Brazil p. 174 fig.; *A. (M.) recifensis* sp. nov. ♂ Pernambuco, Brazil p. 183 figs.; *A. (M.) tenuicollis megacerus* subsp. nov. ♂ Dutch Guiana p. 186 figs.; *A. (Truncaturus) nanus* sp. nov. ♂ Dutch Guiana p. 189 figs.; *A. acutiepimeratus* sp. nov. ♀ Pernambuco, Brazil p. 190 figs.; *A. amplipenicillatus* sp. nov. ♀ Pernambuco, Brazil p. 191 figs.; *A. conferatus* sp. nov. ♀ Pernambuco, Brazil p. 192

figs.; *A. multipapillatus* sp. nov. ♀ Pernambuco, Brazil p. 193 figs.; *A. ovum* sp. nov. ♀ Pernambuco, Brazil p. 194 figs.; *A. quadrisetosus* sp. nov. ♀ Dutch Guiana p. 195 figs.; *A. tumulosus* sp. nov. ♀ Dutch Guiana p. 195 figs.; *A. tumulosus intercursor* subsp. nov. ♀ Pernambuco, Brazil p. 196 fig.; *A. (A.) toriger* ♂ p. 158 figs.; *A. (M.) brevicaudatus* ♂ p. 163 fig.; *A. (M.) cornicaudatus* ♂ p. 165 figs.; *A. (M.) corniger* ♀ p. 165 fig.; *A. (M.) corpulentus* ♂ p. 166 figs.; *A. (M.) cultiger* ♂ + ♀ p. 167 fig.; *A. (M.) diversisetus* ♂ + ♀ p. 169 figs.; *A. (M.) epimerosus* ♂ + ♀ p. 170 figs.; *A. (M.) gibberifer* ♀ p. 172 figs.; *A. (M.) holopygus* ♀ p. 173 figs.; *A. (M.) infractus* ♂ p. 174 figs.; *A. (M.) inornatus* ♂ p. 175 figs.; *A. (M.) mediopunctatus* ♂ p. 176 figs.; *A. (M.) mirabilis* ♂ p. 177 figs.; *A. (M.) nitidus* ♂ p. 178 figs.; *A. (M.) perlongus* ♂ p. 179 figs.; *A. (M.) productus* p. 180 figs.; *A. (M.) quadrutuberculatus* ♂ p. 182 figs.; *A. (M.) sextutuberculatus* ♂ p. 184 figs.; *A. (M.) tenuicollis* ♂ p. 185 figs., VIETS Arch. Hydrobiol. 49 1954; *A. (Arrenurus) erectipetiolatus* sp. nov. ♂ + ♀ Lago Salgado, Amazons p. 177 figs.; *A. (Megaluracarus) amazonicus* sp. nov. ♂ + ♀ Lago Comprido: Lago do Caxias: Lago Curuça, Amazons p. 179 figs.; *A. (M.) bilaciniatus* sp. nov. ♂ + ♀ Lago Iruçanga; Amazons p. 182 figs.; *A. (M.) bipetiolatus* sp. nov. ♂ + ♀ Lago Salgado, Amazons p. 184 figs.; *A. (M.) consanguineus* sp. nov. ♂ + ♀ Laguinho, Santarem: Rio Cupari: Lago do Caxias, Amazons p. 186 figs.; *A. (M.) formosus* sp. nov. ♂ + ♀ Laguinho, Santarem, Amazons p. 187 figs.; *A. (M.) gibberimarginatus* sp. nov. ♂ + ♀ Laguinho, Santarem: Rio Cupari: Itaituba: Lago Curuça: Lago Curi: Lago Timbo, Amazons p. 189 figs.; *A. (M.) hamulatus* sp. nov. ♂ + ♀ Lago da Maritima, Amazons p. 191 figs.; *A. (M.) immanis* sp. nov. ♂ + ♀ Lago Iruçanga: Lago Grande Curuay, Amazons p. 192 figs.; *A. (M.) macrocerus* sp. nov. ♂ + ♀ Igarapé Mapiri des Rio Tapajóz, Santarem: Laguinho, Santarem: Açude Arraia: Jacaré, Rio Tapajóz: Lago Jurucui: Lago Mureta, Amazons p. 195 figs.; *A. (M.) nudicaudatus* sp. nov. ♂ + ♀ Rio Cupari: Lago do Caxias, Amazons p. 198 figs.; *A. (M.) pugiunculatus* sp. nov. ♂ + ♀ Lago Grande Curuay, Amazons p. 200 figs.; *A. (M.) taurus* sp. nov. ♂ + ♀ Lago Jurucui:

Lago Iruçanga, Amazons p. 202 figs.; *A. (M.) verrucifer* sp. nov. ♂ Lago Iruçanga, Amazons p. 204 figs.; *A. (Micruracarus) incurvatus* sp. nov. ♂ + ♀ Laguinho, Santarem: Lago do Caxias: Rio Cupari: Lago Curi: Lago Salgado, Amazons p. 205 figs.; *A. (M.) perspicillatus* sp. nov. ♂ Lago Curi, Amazons p. 207 figs.; *A. (?) tortus* sp. nov. ♀ Lago Comprido, Amazons p. 209 figs.; *A. (?) uberifer* sp. nov. ♀ Rio Aniperi, Amazons p. 210 figs.; *A. (M.) perlongus* p. 200 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *A. (Me.) globator* p. 305 figs., MÜNCHBERG 525; *A. (s. str.) japonicus* larva p. 133 fig.; *A. (s. str.) uchidai* ♀ allotype described p. 134 fig.; *A. (Megalur.) globator* ♂ + ♀ p. 136 figs.; *A. (M.) soochowensis* nymph + larva p. 140 figs., IMAMURA 370; *A. (T.) troglobius* new to Corsica p. 532 figs., ANGELIER 26.

Arrhenuropsides gen. nov. [Arrenuridae: Arrenurinae] defined p. 176; type species *A. parviscutatus* sp. nov. ♂ Lago do Caxias, Amazons p. 176 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Arrhenuropsis gen. nov. [Arrenuridae: Arrenurinae] defined p. 172; type species *A. curvipalpis* sp. nov. ♀ Lago do Caxias, Amazons p. 174 figs.; *A. (?) clavilaminata* sp. nov. ♀ Lago do Caxias, Amazons p. 173 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Arthrodamaeus gen. nov. [Belbidae] type species *Gymnodamaeus reticulatus* Berlese 1910 p. 205 figs., GRANDJEAN Bull. Mus. Hist. nat. Paris (2) 26 1954.

Ascoschöngastia anomala sp. nov. larva off *Peromyscus truei* gratus, Cerro de Zacayuca, Pedregal de San Angel, Mexico also off *Sorex saussurei* p. 100 figs.; *A. pedregalensis* sp. nov. larva off *Baiomys taylori* analogus: *Peromyscus truei* gratus and *Sorex saussurei*, Cerro de Zacayuca, Pedregal de San Angel, Mexico p. 97 figs., HOFFMANN Ciencia 11 1951; *A. monteli* sp. nov. larva off *Mus decumanus*, Ank Ton Pat, Indo China p. 200 figs., ANDRÉ Bull. Mus. Hist. nat. Paris (2) 26 1954; *A. Ewing* 1951 synonym of *Euschöngastia* Ewing 1938 p. 121, WOMERSLEY 809.

Asternolaelaps secundus redescribed p. 88 figs., EVANS 246.

Atacella (Atacellides) schubarti sp. nov. ♂ + ♀ Pernambuco, Brazil p. 88 figs., VIETS Arch. Hydrobiol. 49 1954.

Atacellides schubarti sp. nov. ♂ in mussel, *Diplodon delodontus expansus*, Brazil p. 476 fig., VIETS & PLATE Z. angew. Ent. 35 1954.

Atractidella obtusidens sp. nov. ♂ + ♀ El Tambo, Colombia p. 522 figs.; *A. longidens* ♂ + ♀ redescribed p. 520 figs.; *A.* key to South American species p. 523, LUNDBLAD Ark. zool. N.S. 5 1954.

Atractides (s. str.) *clavipes* sp. nov. ♀ Cintra, Monserrate, Portugal p. 156; *A.* (s. str.) *digitatus* sp. nov. ♂ Granada, Spain p. 156, LUNDBLAD Zool. Anz. 153 1954; *A.* (s. str.) *plaumanni* var. *novus* var. nov. ♂ + ♀ Rio San Juan, Colombia p. 550 figs.; *A.* (s. str.) *plaumanni* var. *sinuatis* var. nov. ♂ + ♀ El Tambo, Colombia p. 551 figs.; *A.* (*Megapodides*) *rostratus* sp. nov. ♂ + ♀ El Tambo, Colombia p. 548 figs.; *A.* (*M.*) *porosus* var. *columbianus* var. nov. ♂ + ♀ El Tambo, Colombia p. 547 figs.; *A.* (s. str.) *brasiliensis* ♂ + ♀ p. 552 figs., LUNDBLAD Ark. zool. N.S. 5 1954; *A.* (*Megapus*) *umbonipalpis* sp. nov. ♂ + ♀ Hoverla, Maramaroscher Schneegebirge, North Carpathia, Hungary p. 153 figs., SZALAY Ann. Biol. hung. 2 1954; *A.* (s. str.) *nodipalpis corsicus* subsp. nov. ♂ + ♀ Corsica p. 139 figs.; *A.* (s. str.) *latipes* ♀ p. 137 figs.; *A.* (s. str.) *subasper* ♂ + ♀ p. 134 figs.; *A.* (*Rhynchomegapus*) *pavesii* ♀ p. 142 figs., ANGELIER Vie et Milieu 5 1954; *A.* (*M.*) *distans* p. 516 figs.; *A.* (*O.*) *octomegapus* p. 516 figs., LÁSKA 436; *A. gracilipes* new to Corsica p. 521 figs., ANGELIER 26; *A.* (s. str.) *nodipalpis nodipalpis* p. 86 fig., IMAMURA 370.

Aturus amnigenus sp. nov. ♂ Black River Falls, Jackson Co., Wisconsin p. 363 fig.; *A. aulix* sp. nov. ♂ Allegheny River, Coudersport, Potter Co., Pennsylvania p. 365 figs.; *A. desquamatus* sp. nov. ♂ Roaring River, Cassville, Barry Co., Missouri p. 352 figs.; *A. hoplomachus* sp. nov. ♂ Marble Falls, Harrison, Newton Co., Arkansas p. 364 figs.; *A. nelsoni* sp. nov. ♂ Elkwater Creek, Elkins, Randolph Co., West Virginia p. 358 figs.; *A. subtusius* sp. nov. ♂ Pigeon River, Cheboygan, Michigan p. 365 fig.; *A. acadensis* ♂ p. 360 figs.; *A. deceptor* ♂ p. 362 figs.; *A. estellae* ♂ p. 354 figs.; *A. formosus* ♂ p. 359 figs.; *A. semilineatus* ♂ p. 356 figs., MITCHELL Trans. Amer. micr. Soc. 73 1954; *A.* (s. str.) *andinus* sp. nov. ♂ El Tambo, ♀ Man-

chique, Colombia p. 568 figs., LUNDBLAD Ark. Zool. N.S. 5 1954; *A.* (s. str.) *ezoensis* sp. nov. ♂ + ♀ River Ishikari, Sôunkyo, Hokkaido, Japan p. 121 figs.; *A.* (s. str.) *heterocaudus* sp. nov. ♀ River Ishikari, Sôunkyo, Hokkaido, Japan p. 124 fig.; *A.* (s. str.) *caudatus* ♂ + N. p. 118 figs.; *A.* (s. str.) *miyashitai* nymph p. 126 fig.; *A.* (s. str.) *ovalis* ♂ + ♀ + N. p. 128 figs., IMAMURA J. Hokkaido Gakugei Univ. Sec. B. Suppl. No. 1 1954.

Audyana gen. nov. [Leeuwenhoekidae: Aporyniinae] defined p. 108 & 117; type species *A. thompsoni* sp. nov. larva off *Heterometrus longimanus* [Scorpion], Pahang Road, Selangor, Malaya p. 118 figs., WOMERSLEY Stud. Inst. med. Res. F.M.S. No. 26 1954; *A. thompsoni* nymph described p. 123 figs., WOMERSLEY 807.

Australiobatella gen. nov. [Hygrobatidae] defined p. 516; type species *A. vietsi* sp. nov. ♂ Coconuco, Colombia p. 516 figs., LUNDBLAD Ark. zool. N.S. 5 1954.

Austrochirus sminthopsis sp. nov. ♀ + ♂ off pouched mouse, *Sminthopsis crassicaudata*, Ninety-mile Desert, west of Tintinara, South Australia p. 118 figs., WOMERSLEY Rec. S. Aust. Mus. 11 1954.

Austromyobia gen. nov. [Myobiidae] defined p. 214; type species *A. schoutedeni* sp. nov. ♀ off Gerbille, *Tatera brantsi*, Kosi Bay, Zululand p. 214 figs., LAWRENCE Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Axonopsalbia (? s. str.) *mediterranea* sp. nov. ♀ Bussaco, Portugal p. 157, LUNDBLAD Zool. Anz. 153 1954.

Axonopsella (? s. str.) *andina* sp. nov. ♀ Coconuco, Colombia p. 557 figs.; *A.* key to South American species p. 558, LUNDBLAD Ark. Zool. N.S. 5 1954; *A.* (*Neaxonopsella*) *mamillata* sp. nov. ♂ + ♀ Lago Mureta, Amazons p. 143 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *A. vaginalis* ♀ p. 113 fig.; *A. vietsi* ♀ p. 119 figs., VIETS 764.

Axonopsis (s. str.) *columbicola* sp. nov. ♂ + ♀ El Tambo, Colombia p. 556 figs., LUNDBLAD Ark. Zool. N.S. 5 1954; *A.* (s. str.) *gracilis* new to Holland p. 188, BESSLING 84; *A.* (*H.*) *rotundifrons* ♂ new to Czechoslovakia p. 294 figs., LÁSKA 435.

Babiangia gen. nov. [Trombiculidae] defined p. 98; type species *B. bulbifera* sp. nov. larva, Babiang, Aitape, New Guinea, paratypes off lizard, *Lygosoma* (*H.*) *forbesii* p. 98 figs., SOUTH COTT Trans. roy. Soc. S. Aust. 77 1954.

Baileyna gen. nov. [Eriophyidae] defined p. 124; type species *B. marianae* sp. nov. ♀ off *Premna* sp. (Verbeniaceae), Tinian Id., Marianas Group p. 124 figs., KEEFER Bull. Dept. Agric. Calif. 43 1954.

Balaustium affine sp. nov. Ufer der March, Austria p. 244 fig., WILLMANN Českoslov. parasit. 1 1954; *B. lapidarium* sp. nov. ♀ Glatzer Schneeberges, Austria p. 494 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Balcanohydracarus corsicus new to Corsica p. 530 figs., ANGELIER 26.

Bandakia corsica new to Corsica p. 520 figs., ANGELIER 26.

Barbaxonella gen. nov. [Axonopsidae] *ovalis* sp. nov. ♂ St. Gomba Dão, Portugal p. 158, LUNDBLAD Zool. Anz. 153 1954.

Bdellonyssus dogieli sp. nov. ♀ + ♂ off *Dryomys nitedula*, Gisser ridge, Tadzhikistan p. 311 figs., BREGETOVA Trav. Inst. zool. Acad. Sci. U.R.S.S. 13 1953.

Belba clavigera sp. nov. Balcarova, Austria p. 252 figs.; *B. lengersdorfi* var. *moraviae* var. nov. Austria p. 250 figs. *B. aegrota* p. 249 figs., WILLMANN Českoslov. parasit. 1 1954; *B. longisetosa* sp. nov. Glockengruppe, Austria p. 499 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Bimichaelia rectangula sp. nov. ♀ Glatzer Schneeberge, Austria p. 479 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Binuncus gen. nov. [Myobiidae] defined p. 242; type species *Myobia magna* Radford 1934 p. 242 fig., RADFORD Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Blattisocius tineivorus new to Australia p. 184 fig., WOMERSLEY 804.

Boletoglyphus gen. nov. [Tyroglyphidae] defined p. 262; type species *B. cribrus* sp. nov. hypopi off *Boleto-phagus reticulatus* (Tenebrionidae), Leningrad, Russia p. 263 figs., VOLGIN Ent. Obozr. Moscow 33 1953.

Boophilus calcaratus calcaratus ♀ redescribed p. 273 figs., DIAS 209; *B. (U.) fallax* teratology p. 2263 fig., DIAS 210.

Boydaiia gen. nov. [Speleognathidae] defined p. 82; type species *Speleognathus sturni* Boyd 1948 p. 82; *B. angelae* sp. nov. ♀ from mucus of frog's mouth [*Limnodynastes tasmaniensis*], Adelaide, South Australia p. 83 figs.; *Speleognathus striatus* Crossley 1952 transferred p. 84; *B.* key to species p. 84, WOMERSLEY Trans. roy. Soc. S. Aust. 76 1953; *B. derricksi* sp. nov. ♀ off *Rattus assimilis*, Mount Glorious, Queensland p. 65 figs., WOMERSLEY Trans. roy. Soc. S. Aust. 77 1954.

Brachychthonius lapponicus p. 17 fig., HAMMER 315.

Brachypoda (s. str.) *nipponica* sp. nov. ♂ + ♀ River Kushiro, Hokkaido, Japan p. 114 figs., IMAMURA J. Hokkaido Gakugei Univ. Ser. B. Suppl. No. 1 1954.

Brennanella gen. nov. [Trombiculinae] defined p. 302; type species *B. longispina* sp. nov. larva off *Rhinolophus clivosus acrotis*, Ta'izz, Yemen p. 303 fig., RADFORD Fieldiana, Zool. 34 1954.

Brennania gen. nov. [Trombiculidae] type species not given p. 30, VERCAMMEN-GRANDJEAN Rev. Zool. Bot. afr. 50 1954.

Brevipalpus cactorum ♂ + ♀ redescribed p. 564 figs.; *B. confusus* ♂ + ♀ redescribed p. 567 figs.; *B.* remarks on gen. p. 563, ANDRÉ 15; *B. geisenheyneri* ♀ + ♂ p. 326 figs., ANDRÉ 20; *B. geisenheyneri*, host list for France p. 480, ANDRÉ 22; *B. inornatus*, taxonomic status, distribution and host plants, development and control p. 449 figs., MORISHITA 520; *B. pseudocuneatus* p. 246 figs., VERGANI 762.

Bryobia praetiosa, life history p. 137 figs., MATHYS 494; *B. praetiosa* p. 235 figs., VERGANI 762.

Caeculus hardyi sp. nov. intercepted at Laredo, Texas, also from nest of *Neotoma micropus* (wood rat) Harlingen, Texas and San Pedro, Mexico p. 36 figs.; *C. mexicanus* sp. nov. San Luis Potosi, Mexico, also intercepted at Brownsville, Texas and Laredo, Texas p. 34 figs.; *C. orchidicolis* sp. nov. Chilpancingo, Mexico also intercepted in Texas p. 30 figs.; *C. oregonus* sp. nov.

Oak Ridge, Oregon p. 28 figs.; *O. potosi* sp. nov. Tamazunchale, Mexico, intercepted at Laredo, Texas p. 32 figs.; *C. tipus* nymph described p. 38 figs.; new records for other species p. 37, MULAİK & ALLRED Proc. ent. Soc. Wash. 56 1954.

Calepitrimerus occithujae sp. nov. ♀ + ♂ off *Thuja occidentalis* (Cupressaceae), Sacramento, California p. 72 figs.; *C. gilsoni* sp. nov. ♀ off *Vaccinium ovatum*, (Ericaceae), Sonoma Co., California p. 72 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953.

Calomyx japonicus ♀ + ♂ p. 18 figs., IMAMURA 370.

Calypstostoma stellatum sp. nov. Admont, Austria p. 497 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Camerorthrombidium auberti sp. nov. Ambrym Id., Lönre, New Hebrides p. 197 figs.; *C. hebridisianum* sp. nov. Erromango Id.: Malékula Id.: Epi Id., New Hebrides p. 196 figs.; *C. insulanum* sp. nov. Tannat Id., New Hebrides p. 194 figs., ANDRÉ Bull. Mus. Hist. nat. Paris (2) 26 1954; *C. noricum* NOM. NUD. p. 374, FRANZ in Spiegel, Land-Tierwelt 1 1954.

Canestrinia gen. nov. [Canestriniidae] defined p. 747; *C. dorcicola* sp. nov. ♂ off *Dorcus parallelepipedus*, Italy p. 749 figs.; *C. procustidis* sp. nov. ♂ off *Procutus coriaceus*, Italy p. 748 fig., BERLESE Atti R. Ist. Venet. (5) 7 1881 [Omitted from Z.R. 1881]; *C. javensis* p. 84 figs.; *C. macgillavryi* p. 86 figs., COOREMAN 183.

Carabidobius gen. nov. [Tyroglyphidae] defined p. 264; type species *C. radiatus* sp. nov. hypopi off *Carabus estreicheri* (Col., Carabidae), Russia p. 265 figs., VOLGIN Ent. Obozr. Moscow 33 1953.

Caraboecius bourgognei p. 87 figs., COOREMAN 183.

"*Cecidophyes*" *hendersoni* sp. nov. ♀ off *Yucca glauca* (Liliaceae), Syracuse, Kansas p. 123 figs., KEIFER Bull. Dept. Agric. Calif. 43 1954.

Centrolimnesia lundbladi sp. nov. ♂ + ♀ Igarape Laguinho, Amazonas p. 117 figs.; *C. bondi* p. 116 fig., VIETS Schweiz. Z. Hydrol. 16 1954; *C. bondi* ♂ p. 66 figs.; *C. schubarti* ♂ p. 67 figs., VIETS 764.

Cepheus heimi sp. nov. locality not given p. 83, OUDEMANS Ent. Ber. 1 1903. [Omitted from Z.R. 1903.]

Cerachipteria franzi sp. nov. Dreisteckengipfel, Niedere Tauern, Austria p. 512 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Chamobates longipilis sp. nov. Glockengruppe, Austria p. 507 fig.; *C. tricuspidatus* sp. nov. Glockengruppe, Austria p. 507 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Chelanyssus gen. nov. [Laelaptidae] defined p. 5; type species *Liponyssus forsythi* Zumpt 1950 p. 5 fig.; also transferred *Liponyssus aethiopicus* Hirst p. 7 figs., ZUMPT & TILL S. Afr. J. med. Sci. 18 1953.

Cheletes intrepidus sp. nov. ♂ Columbia p. 84; *C. rapax* sp. nov. ♂ Marianne Is. p. 84; *C. malaccensis* sp. nov. ♂ + ♀ off *Psittinus incertus*, Malacca p. 84; *C. vorax* sp. nov. ♂ + ♀ off bat, Marianne Is. p. 84, OUDEMANS Ent. Ber. 1 1903. [Omitted from Z.R. 1903.]

Cheletogenes hepburni sp. nov. on mussel scale (*Lepidosaphes beekii*), Hamburg, Peddie District, South Africa p. 70 figs., LAWRENCE Ann. Natal. Mus. 13 1954.

Cheletomorpha bakeri sp. nov. ♀ from nest of weaver-bird, Karamoja, Uganda p. 67 figs., LAWRENCE Ann. Natal. Mus. 13 1954.

Chelonuropoda gen. nov. [Uropodina] defined p. 195; type species *C. dispirata* sp. nov. ♂ + ♀ + N. Rondon, Paraná and Nova Teutonia, St. Catarina, Brazil p. 196 figs., SELLNICK Dusenja 5 1954.

Cheyletomimus berlesii new to Britain p. 806, EVANS 247.

Cheyletus ugandanus sp. nov. ♀ from nest of weaver-bird, Karamoja, Uganda p. 65 figs., LAWRENCE Ann. Natal. Mus. 13 1954.

Cheylestigmaeus howellsii sp. nov. ♂ Carmarthenshire, Wales p. 804 figs.; *C. salinus* sp. nov. ♂ + ♀ Carmarthenshire, Wales p. 803 figs., EVANS Proc. zool. Soc. Lond. 123 1954; *C. angustimaxillatus* ♂ p. 486 fig.; *C. grandiceps* p. 484 fig., WILLMANN 800.

Clathrosperchon sp. p. 33 figs., VIETS 764.

Cocceupodes setosus sp. nov. ♀ The Burren, Co. Clare, Eire p. 801 figs., EVANS Proc. zool. Soc. Lond. 123 1954.

Cockingsia gen. nov. [Leeuwenhoekidae: Apoloniinae] defined p. 108 & 115; type species *C. tenuipes* sp. nov. larva off giant longicorn beetle, Sungei Buloh, Selangor p. 117 figs., WOMERSLEY Stud. Inst. med. Res. F.M.S. No. 26 1954.

Coleopterophagus megninii p. 84 figs. COOREMAN 183.

Corticacarus (*Polycorticacarellus* subgen. nov.) *multioporus* sp. nov. ♂ Rio San Juan, Colombia p. 529 figs.; *C. (Corticacarellus) vietsi* sp. nov. ♂ El Tambo, Colombia p. 531 figs.; *C. (Paracorticacarus* subgen. nov.) *longirostris* sp. nov. ♂ + ♀ Coconuco, Colombia p. 532 figs.; *C. (P.) curvirostris* sp. nov. ♂ + ♀ Rio San Juan, Colombia p. 537 figs.; *C. (P.) curvirostris* var. *minutissimus* var. nov. ♂ + ♀ Coconuco, Colombia p. 539 figs.; *C. (P.) motasi* sp. nov. ♀ El Tambo, Columbia p. 543 figs.; *C. (P.) multiscutus* sp. nov. ♂ + ♀ El Tambo, Colombia p. 534 figs.; *C. (P.) multiscutus* var. *divisus* var. nov. ♂ El Tambo, Colombia p. 535 fig.; *C. (P.) multiscutus* var. *reductus* var. nov. ♀ El Tambo, Colombia p. 536 figs.; *C. (P.) setipes* sp. nov. ♂ Coconuco, Colombia p. 544 figs.; *C. (P.) testudo* sp. nov. ♂ + ♀ Rio San Juan, Colombia p. 540 figs.; *C. (P.) testudo* var. *aberratus* var. nov. ♂ + ♀ Coconuco, Colombia p. 542 figs.; *C. (s. str.) schadei* var. *columbianus* ♀ + ♂ p. 527 figs.; *C.* key to subgen. and species p. 545, LUNDBLAD Ark. zool. N.S. 5 1954.

Cosmolaelaps bicuspisetosus sp. nov. ♀ + ♂ Glocknergruppe, Austria p. 460 figs., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953; *C. leitnerae* NOM. NUD. p. 348, FRANZ in Siegel, Land-Tierwelt 1 1954.

Cryptognathus lagena redescribed, respiratory apparatus described p. 370 figs., FEIDER 255.

Cryptomyobia gen. nov. [Myobiidae] defined p. 241; type species *Myobia rotundata* Lawrence 1951 p. 242, RADFORD Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Cryptoplophora abscondita redescribed p. 322 figs., GRANDJEAN 295.

Ctenacarus araneola redescribed, variations p. 249 figs., GRANDJEAN 302.

Cunaxa brevicornis p. 11 fig., COOREMAN 179.

Cyrtocheles subgen. nov. see *Geholaspis*, VALLE 756.

Cyrtolaelaps leitnerae NOM. NUD. p. 338, FRANZ in Siegel, Land-Tierwelt 1 1954; *C. planicola* ♂ described p. 181 fig., LOMBARDINI 467.

Dadayella guttifera sp. nov. ♀ Pernambuco, Brazil p. 152 figs.; *D. rotunda subrotundata* subsp. nov. ♀ Dutch Guiana p. 155 figs.; *D. rotunda* ♀ p. 154 figs., VIETS Arch. Hydrobiol. 49 1954; *D. walteri* sp. nov. ♀ Popayan, Colombia p. 572 figs.; *D.* key to South American species p. 573, LUNDBLAD Ark. Zool. N.S. 5 1954.

Damaeus verticillipes similis Willmann NOM. NUD. p. 396, FRANZ in Siegel, Land-Tierwelt 1 1954; *D. clavipes* p. 482 figs.; *D. onustus* p. 482 fig., GRANDJEAN 298; *D. onustus* prelarva described p. 582 figs., GRANDJEAN 299.

Dartia (D.) parva ♂ + ♀ described p. 91 figs., ANGELIER 27.

Decaroquea subgen. nov. see *Roquea*, VIETS 764.

Dendrolaelaps adalaidae sp. nov. ♀ + ♂ from frass of bark-boring beetles, Adelaide p. 113 fig.; *D. concinna* sp. nov. ♀ from frass of bark-boring beetles, Adelaide p. 115 fig., WOMERSLEY Rec. S. Aust. Mus. 11 1954.

Dermatophagoides africanus sp. nov. ♀ + ♂ on Angolan (Portuguese West African) fish meal in warehouses at Halesworth, Suffolk and Kimbolton, Hunts. p. 1 figs., HUGHES Proc. zool. Soc. Lond. 124 1954.

Dermoglyphus megninii sp. nov. ♂ + ♀ off *Cetonia* sp., Venezia & Padova, Italy p. 750 figs., BERLESE Atti R. Ist. Venet (5) 7 1881. [Omitted from Z.R. 1881.]

Diagamasellus cornutus Hirschmann NOM. NUD. p. 341, FRANZ in Siegel, Land-Tierwelt 1 1954; *D. halophilus* new to Britain p. 793, EVANS 247; *D. disetus* p. 107 fig.; *D. fallax* p. 106 figs.; *D. halophilus* p. 108 fig.; *D. hexaspinosus* p. 107 fig.; *D. presepum* p. 107 fig.; *D. tetraspinosus* p. 107 fig., HIRSCHMANN 334; *D. armatus* p. 246 fig.; *D. coleopterophilus* p. 246 fig.; *D. disetus* p. 246 fig.; *D. elaterophilus* p. 246 fig.; *D.*

redivivum p. 173 fig.; *E. romola* sp. nov. larva off *Perognathus californicus*, Hastings Reservation, Monterey Co., California also off *Dipodomys venustus*, off *Citellus beecheyi* p. 179 fig., BRENNAN & JONES Wasmann J. Biol. 12 1954; *E. indicella* sp. nov. larva off *Chiropodomys legatus* (rat), Bundu Tuhan, Mt. Kinabalu, North Borneo p. 77 figs.; *E. ocellifera* sp. nov. larva off *Chiropodomys legatus* (rat), Tenompok, Mt. Kinabalu, North Borneo p. 79 figs.; *E. daria* sp. nov. larva off ground bird (unidentified), Tenompok, Mt. Kinabalu, North Borneo: also off *Tupaia montana baluensis*, and *Tupaia m. minor*, off *Nannosciurus whiteheadi* and *Rattus whiteheadi* p. 81 figs.; *E. rohisi* sp. nov. larva off *Chiropodomys legatus* (rat), Bundu Tuhan, Mt. Kinabalu, North Borneo p. 79 figs.; *E. (Walchiella) asanluca* sp. nov. larva off *Tupaia tana*, Kuching, Sarawak p. 84 figs.; *E. (W.) calunosa* sp. nov. larva off *Rattus r. baluensis*, Kamborangah, Mt. Kinabalu, North Borneo p. 84 figs., TRAUB & AUDY Stud. Inst. med. Res. F.M.S. No. 26 1954; *E. jonesi* sp. nov. larva off white-footed mouse, *Peromyscus leucopus*, Rock, Cowley Co., Kansas p. 407 figs., LIPOVSKY & LOOMIS J. Parasit. 40 1954; *E. kitajimai* sp. nov. larva off *Rattus rattus* spp., Oro-ike lakelet, Shiitori Shrine, Miyake-jima Id., Japan p. 15 figs., FUKUZUMI & OBATA Kitasato Arch. exp. Med. 26 1953; *E. koreaensis* sp. nov. larva off *Rattus rattus*, Chorwon, Southern Korea p. 14 fig., JAMESON & TOSHIOKA Pacif. Sci. 8 1954; *E. laurenti* sp. nov. larva off *Dasymys bentleyae*, Musha, Ruanda, Belgian Congo p. 202 figs.; *E. thomasi* sp. nov. larva off *Claviglis* sp., Astrida, Belgian Congo: also off *Arvicanthis abyssinicus*, off *Dasymys bentleyae* and off *Lemniscomys striatus massaicus* p. 200 figs., JADIN & VERCAMMEN-GRANDJEAN Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954; *E. paradoxa* sp. nov. larva off *Pelomys fallax*, off *Dasymys bentleyae*, off *Oenomys hypoxanthus*, off *Otomys irroratus*, off *Thamnomys dryas*, off *Arvicanthis abyssinicus*, off *Lemniscomys striatus*, off *Leggada birungensis*, off *Lophuromys aquilus*, off *Rattus r. frugivorus*, off *Lemniscomys griselda*, off *Dendromus pumilio*, off *Claviglis* sp., off *Crociodura* sp., Bukavu: Luberizi: Kindu: Kabunga, Belgian Congo nymph described p. 273; *E. paradoxa* var.

gilleti var. nov. larva off *Pelomys fallax* and *Oenomys hypoxanthus*, Luberizi, Belgian Congo p. 278; *E. paradoxa nana* subsp. nov. larva off *Oenomys hypoxanthus* and *Lemniscomys striatus*, Kindu and Kabunga, Belgian Congo p. 278, JADIN ET AL. Rev. Zool. Bot. afr. 49 1954; *E. penetrans* sp. nov. larva off *Otomys irroratus* and off *Dasymys bentleyae*, Bukavu, Lac Kivu, Belgian Congo, nymph described p. 284 figs.; *E. pirloti* sp. nov. larva off *Lophuromys aquilus* and off *Tachyoryctes ruandae*, Lwiro, Bikavu, Belgian Congo, nymph described p. 287 figs., JADIN & VERCAMMEN-GRANDJEAN Rev. Zool. Bot. afr. 49 1954; *E. alpina* redescribed p. 258 fig.; *E. ikaensis* redescribed p. 259 fig.; *E. kitajimai* redescribed p. 261 fig.; *E. miyagawai* redescribed p. 262 fig.; key to Japanese species p. 258, SASA & JAMESON 646; *E. costulata*, new hosts, *Microtus arvalis* and *M. agrestis*, Belgium p. 125, COOREMAN 178; *E. ikaensis* nymph p. 426 figs., SASA 645; *E. (Helenicula) subgen. nov.* type species *Neoschöngastia lanius* Radford p. 152, AUDY Stud. Inst. med. Res. F.M.S. No. 26 1954.

Euschöngastoides subgen. nov. ~~nov.~~
Trombicula, LOOMIS 468.

Eutetranychus monodi sp. nov. ♀ + ♂ off leaves of *Cassia siamea* and *Grewia mollis*, Ifan, Dakar, Senegal p. 859 figs., ANDRÉ Bull. Inst. franç. Afr. noire 16A 1954.

Eutrombicula vernalis new to Austria p. 90, KEPKA 406.

Ewingia cenobitae off crab, *Cenobita clypeatus*, new record to Jamaica p. 76 fig., FONTAINE 268.

Eylais waikaruae sp. nov. ♀ + ♂ + N + L, Maramau lagoon, South Wairarapa, New Zealand p. 390 figs., life history p. 398 figs., internal anatomy p. 404 figs., STOUT Trans. roy. Soc. N.Z. 81 1953; *E. nullipons* p. 46 figs., LUNDBLAD 473.

Fainiella womersleyi var. *acutalis* var. nov. larva off *Dendrohyrax arboreus adolfi-friederici*, River Akanyaru, Astrida (Ruanda), Belgian Congo p. 9 figs., JADIN ET AL. Rev. Zool. Bot. Afr. 49 1954; *F. womersleyi* nymph described p. 29 figs., VERCAMMEN-GRANDJEAN 760.

Feltria ezoensis sp. nov. ♀ River Ishikari, Sôunkyo, Hokkaido, Japan p. 161 fig.; *F. ishikariensis* sp. nov. ♀ River Ishikari, Sôunkyo, Hokkaido, Japan p. 162 fig.; *F. (Feltriella) macroplata* sp. nov. ♂ River Ishikari, Kamikoshi: ♀ Sôunkyo, Hokkaido, Japan p. 94 figs.; *F. (s. str.) cornuta* var. *japonica* var. nov. ♂ River Shokotsu, Kamishokotsu-mura, Hokkaido, Japan p. 89 fig.; *F. (s. str.) minuta* ♂ + ♀ p. 91 figs.; *F. (Feltriella) rubra* ♂ + ♀ p. 98 figs., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954; *F. menzeli* new to Corsica p. 308 fig., VIETS 766.

Flabellifrontipoda neotropica sp. nov. ♂ Cocoonuco: 1 Puracé, Colombia p. 458 figs.; *F. meidermi* sp. nov. ♂ El Tambo: 2 Manichique, Colombia p. 456 figs.; *F. key* to South American species p. 460, LUNDBLAD Ark. Zool. N.S. 5 1954.

Floracarus gen. nov. [Eriophyidae: Phyllocoptinae] defined p. 69; type species *F. calonyctionis* sp. nov. ♂ + ♀ off *Calonyction aculeatum*, Lake Okeechobee, Florida p. 69 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953.

Forelia triangularis new to Holland p. 188, BESSELING 84.

Frontipoda hastata sp. nov. ♀ Sta. Gomba Dão, Portugal p. 155, LUNDBLAD Zool. Anz. 53 1954.

Gahrlepiea (*Schöngastiella*) *arona* sp. nov. larva off *Rattus mülleri*, Ulu Langat, Selangor, Malaya: also off *Rattus whiteheadi* p. 95 figs.; *G. (S.) birella* sp. nov. larva off *Rattus bowersi*, Ulu Langat, Selangor, Malaya p. 95 figs.; *G. (S.) erula* sp. nov. larva off *Rattus r. sladeni*, Shingbuiyang, North Burma: also off *Rattus flavipectus yunnanensis* and off *Rattus f. fulvescens* p. 91 figs.; *G. (S.) gammonsii* sp. nov. larva off *Anourosorex squamipes assamensis* (short-tailed shrew), Ledo, Assam, India p. 100 figs.; *G. (S.) helata* sp. nov. larva off *Crocidura* sp., (shrew), Shingbuiyang, North Burma p. 93 figs.; *G. (S.) kalrata* sp. nov. larva off *Rattus rattoides* sp. (*turkestanicus* ?), Sonmarz, Kashmir p. 98 figs.; *G. (S.) lista* sp. nov. larva off *Suncus caeruleus fulvovirens*, Ledo, Assam, India: also off *Anourosorex squamipes assamensis* and off *Crocidura* sp. p. 89 figs.; *G. (S.) ligula* p. 100 figs.; *G. (S.) punctata* p. 103 figs., TRAUB & EVANS Stud. Inst. med. Res. F.M.S. No. 26 1954; *G. (W.) brennani*

var. *ventralis* p. 12 fig., JAMESON & TOSHIOKA 381; *G. (W.) ogatai* redescribed p. 254 fig.; *G. (G.) saduski* redescribed p. 254 fig., SASA & JAMESON 646; *G. saduski* nymph p. 427 figs., SASA 645.

Galumna elimatus ithacensis, developmental stages p. 652 figs.; *G. nervosus*, developmental stages p. 658 figs., SENGBUSCH 671.

Garmania proteae sp. nov. ♀ off *Protea barbiger*, Grabouw, South Africa p. 243 figs.; *G. vanderbergi* sp. nov. ♀ + ♂ off *Protea mellifera*, Grabouw, South Africa p. 241 figs., RYKE J. ent. Soc. S. Afr. 17 1954; *G. (Paragarmania) urticana* sp. nov. ♂ off *Urtica dioica*, Neercanne, Limburg, Holland p. 22 figs., NESBITT Natuurh. Maandbl. 43 1954; *G. hypudaei* comb. nov. p. 794; *G. pomorum* ♂ described p. 794 figs.; *G. amboinensis* ♂ described p. 796 figs.; *G. domesticus* new to Britain p. 794, EVANS 247.

Geayia (*Geayella*) *amazonica* sp. nov. ♂ Boca Igarapé Ingatuba, Amazons p. 164 figs.; *G. (G.) latirostris* sp. nov. ♀ Igarapé São Benedito, Amazons p. 165 figs.; *G. (P.) schubarti* p. 166 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *G. (Geayella ?) flagellifera* sp. nov. ♂ + ♀ Pernambuco, Brazil p. 145 figs.; *G. (Geayidea) inchoata* sp. nov. ♂ Pernambuco, Brazil p. 140 fig.; *G. (G.) micronychia* sp. nov. ♂ Pernambuco, Brazil p. 141 figs.; *G. (G.) monochroa* sp. nov. ♀ + ♂ Pernambuco, Brazil p. 144 figs.; *G. (Pirapama) schubarti* ♂ p. 148 fig., VIETS Arch. Hydrobiol. 49 1954.

Geholaspis gen. revised p. 317; *G. (Geholaspis) berlesi* sp. nov. Carnia, Italy p. 332 figs.; *G. (G.) alpinus* redescribed p. 335 figs.; *G. (G.) longispinosus* p. 324 figs.; *G. (G.) longispinosus forolivensis* redescribed p. 325 figs.; *G. (G.) pauperior* p. 339; *G. (Cyrtacheles* subgen. nov.) p. 340; type species *G. (C.) asper* Berlese 1904 p. 341 figs.; *G. (Longicheles* subgen. nov.) p. 343; type species *G. (L.) mandibularis* Berlese 1904 p. 344 figs.; *G. (L.) mandibularis hortorum* p. 349 figs.; *G. (L.) longulus* redescribed p. 351 fig.; key to species pp. 340 and 354, VALLE Redia 38 1953.

Georgella koenikei nymph described p. 86 figs., ANGELIER 27; *G. koenikei* new to Hungary p. 155 fig., SZALAY 712.

Glytiacus **gen. nov.** [Eriophyidae] defined p. 67; type species *G. lithocarpus* **sp. nov.** ♀ off *Lithocarpus densiflora* (Fagaceae), Marin Co., California p. 67 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953.

Grossia **gen. nov.** [Leeuwenhoekidae: Apoloniinae] defined p. 109 and 111; type species *G. onychia* **sp. nov.** larva off *Chyzeria australiense* [Trombid.], Ottway Ranges, Victoria p. 112 figs., WOMERSLEY Stud. Inst. med. Res. F.M.S. No. 26 1954.

Gymnodamaeus bicostatus p. 205 figs., GRANDJEAN 297.

Haemaphysalis muhsami **sp. nov.** ♂ + ♀ + N. off *Helogale p. parvula*, [Mamm.] Maputo, Lourenço Marques, Mosambique p. 3 figs., DIAS Mem. Mus. zool. Univ. Coimbra No. 225 1954; *H. zambeziæ* **sp. nov.** ♂ + ♀ off *Oreotragus oreotragus*, Zambézia, Mosambique p. 1 figs., DIAS Mem. Mus. Zool. Univ. Coimbra No. 219 1953; *H. leporipalustris* ♂ + ♀ new to Venezuela p. 74 figs., VOELSANG & DIAS 773; *H. leachi* *leachi* *triatology* p. 2263 figs., DIAS 210; *H. parmata* new to Mosambique p. 142 figs.; *H.* key to species of Mosambique p. 148, DIAS 215.

Haemogamasus citelli **sp. nov.** ♀ off *Citellus pygmaeus*, Limang Stepnov region, Astrakhan, Russia p. 72 figs., BREGETOVA & NELZINA Mag. Parasit. Moscow 14 1952; *H. hirsutosimilis* p. 483 figs., BREGETOVA 112.

Haemolaelaps dissimilis **sp. nov.** ♀ off bird, *Emberiza rustica latifascia*, Miyake Id., Izu Seven Is. p. 12 figs.; *H. macroventralis* **sp. nov.** ♀ off giant flying squirrel, *Petaurista leucogenys*, Onsen, Matsuyama Pref., Shikoku, Japan p. 14 figs.; *H.* key to ♀♀ of species of Japan, Korea and Manchuria p. 10, ASANUMA Misc. Rep. Res. Inst. nat. Resour. Tokyo No. 30 1953; *H. eloffi* **sp. nov.** ♀ + ♂ off *Cryptomys bigalkeri*, Bloemfontein, Orange Free State p. 226 figs.; *H. hystrixi* **sp. nov.** ♀ + ♂ off *Hystrix galeata*, Morota, Karamoja, Uganda p. 235 figs.; *H. natalensis* **sp. nov.** ♀ + ♂ off *Cryptomys natalensis*, Pietermaritzburg, Natal p. 230 figs.; key to ♀♀ of *H.* in Ethiopian region p. 237; Status of gen. *H.* p. 225, ZUMPT & TILL An. Inst. Med. trop., Lisboa 10 1953; *H. namrui* **sp. nov.** ♂ + ♀ off *Meriones rex buryi*, Ta'izz, Yemen

p. 310 figs., RADFORD Fieldiana, Zool 34 1954; *H. phoeniculi* **sp. nov.** ♀ + ♂ off red-billed hoopoe, *Phoeniculus purpureus*, Potchefstroom, Transvaal p. 209 figs.; *H. sudanicus* **sp. nov.** ♀ off *Lophuromys aquilus*, Torit, Anglo-Egyptian Sudan p. 213 fig., ZUMPT & TILL Rev. Ecuat. Ent. Par. 2 1954.

Halolaelaps nodosus new to Britain p. 793, EVANS 247.

Hannemania hylae larva redescribed p. 91 figs., HOFFMANN 351.

Harpyrhynchus capellae **sp. nov.** ♀ off *Capella gallinago*, locality not given p. 186 fig.; *H. cylindripalpus* **sp. nov.** ♀ off *Fringilla coelebs*, locality not given p. 183 fig.; *H. longipes* **sp. nov.** ♂ off *Troglodytes troglodytes*, locality not given p. 183 fig.; *H. monstrosus* **sp. nov.** ♀ + ♂ + N + L off *Garrulus glandarius*, locality not given p. 188 figs.; *H. ovalis* **sp. nov.** ♀ off *Passer domesticus*, locality not given p. 192 fig.; *H. plumaris* **sp. nov.** ♀ + ♂ off *Fringilla coelebs*, *Chloris chloris*, *Carduelis cannabina*, *Muscicapa striata* and *Nyroca ferina*, locality not given p. 193 figs.; *H. reductus* **sp. nov.** ♀ + ♂ + N off *Micropus apus*, locality not given p. 196 fig.; *H. tracheatus* **sp. nov.** ♀ off *Buteo buteo*, locality not given p. 187 fig.; *H. nidulans* p. 180 figs.; *H.* key to species p. 179, FRITSCH Zool. Anz. 152 1954.

Helenicula **subgen. nov.** see *Euschön-gastia*, AUDY 42.

Hemicheyletus **gen. nov.** [Cheyletidae] for *Cheyletiella lemuricola* Lawrence and *Cheyletiella curvidens* Lawrence, type species not designated p. 74, LAWRENCE Ann. Natal Mus. 13 1954.

Hemitarsonemus peregrinus **sp. nov.** ♂ + ♀ off orange leaves, Ft. Pierce, Florida p. 1300 figs.; *H. latus* p. 1293 figs.; *H. tepidariorum* p. 1308 figs.; *H.* key to species p. 1292, BEER Kans. Univ. Sci. Bull. 36 1954.

Hesperohygrobates **gen. nov.** [Hygrobatidae] defined p. 518; type species *H. torae* **sp. nov.** ♂ Rio San Juan, Colombia p. 518 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Heteratractides serratirostris ♂ + ♀ redescribed p. 470 figs., LUNDBLAD 472.

Hirstionyssus bregatovae **sp. nov.** ♂ + ♀ off *Prometheomys schaposchnikovi*, Gruzic, Kazbek region: Nord

Osetia, Sadonsk region: Russia p. 339 figs.; *H. prometheomicus* sp. nov. ♀ off *Prometheomys schaposchnikovi*, Nord Osetia, Sadonsk region, Russia p. 343 figs., RAZUMOVA Mag. Parasit. Leningr. 15 1953; *H. carnifex* subsp. *pachypus* subsp. nov. ♀ Hall, Admont, Austria p. 467 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. I 162 1953.

Histiostoma laboratorium, anatomy, development and physiology p. 71 figs., PERRON 569.

Holostaspis terrestris sp. nov. ♀ Italy p. 7 fig.; BERLESE Acari, Myriop. Scorp. 52 1889. [Omitted from Z.R. 1889.]

Hungarohydracarus subterraneus new to Corsica p. 528 figs., ANGELIER 26.

Hyalomma gen. revised p. 150; *H. dromedarii* redescribed, with synon. p. 152 figs.; *H. excavatum* redescribed, with synon. p. 155 figs.; *H. impressum* redescribed, with synon. p. 163 figs.; *H. marginatum* redescribed, with synon. p. 159 figs.; *H. rufipes* redescribed, with synon. p. 167 figs.; *H. truncatum* redescribed, with synon. p. 164 figs., FELDMAN-MUHSAM 257.

Hydrachna evansensis sp. nov. ♂ + N, near Evans Bay, New Zealand p. 425 figs.; *H. maramauensis* sp. nov. ♀ + ♂ Maramau lagoon, South Wairarapa, New Zealand p. 419 figs.; *H. wainuiensis* sp. nov. ♂ Wainui-o-mata Reservoir p. 429 figs.; *H. maramauensis* life history p. 452 figs., STOUT Trans. roy. Soc. N.Z. 81 1953; *H. (Scutohydrachna?) heterophthalma* sp. nov. nymph, Pernambuco, Brazil p. 25 figs.; *H. (S.?) ventrifissa* sp. nov. nymph, Brazil p. 24 figs.; VIETS Arch. Hydrobiol. 49 1954; *H. (R.) levis acuminata* subsp. nov. ♂ Schmiedsee (Rüthsee), Germany p. 49 figs., VIETS Nachr. naturw. Mus. Aschaffenburg No. 45 1954; *H. (R.) leegei* new to Hungary p. 203, SZALAY 711; *H. (R.) processifera* nymph p. 129 fig., SZALAY 710; *H. (Diplohydrachna) trilobata* ♀ p. 5 fig., IMAMURA 370.

Hydrodroma despicieus var. *clavipes* var. nov. ♀ El Tambo, Colombia p. 449 figs.; *H.* key to South American species p. 450, LUNDBLAD Ark. Zool. n.s. 5 1954; *H. despicieus longiseta* subsp. nov. ♀ + ♂ Dutch Guiana and Brazil p. 30 fig.; *H. despicieus macronyx* subsp. nov. ♀ Pernambuco, Brazil p. 31 figs.; *H. despicieus micronyx* subsp. nov. ♀

Pernambuco, Brazil p. 31 figs.; *H. peregrina robusta* subsp. nov. ♀ Pernambuco, Brazil p. 32 figs., VIETS Arch. Hydrobiol. 49 1954; *H. despicieus crassiseta* subsp. nov. Igarapé do Guaranazal, Amazons p. 95 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *H. despicieus* larva p. 36 fig., IMAMURA 370.

Hydrovolzia gerhardi sp. nov. ♀ + ♂ Rock Creek Canyon, Kankakee Co., Illinois p. 3 figs., MITCHELL Nat. Hist. Misc. No. 134 1954; *H. oscensis* new to Corsica p. 307, VIETS 766.

Hydryphantes (*Polyhydryphantes*) *pinguipalpis* sp. nov. La Plata: Montevideo, Uruguay p. 28 figs.; *H. (H.) ramosus pumilus* subsp. nov. Dutch Guiana p. 26 fig.; *H. (P.) papillosus* p. 28 figs., VIETS Arch. Hydrobiol. 49 1954; *H. ramosus undulatifrons* subsp. nov. ♀ Fordlandia, Rio Tapajoz: Paraná Yaya, Amazons p. 93 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *H. hellichi* ♀ p. 55 figs., VIETS 769; *H. (H.) ruber* p. 204 figs.; *H. (H.) ruber nonundulatus* new to Hungary p. 205 figs.; *H. (H.) ruber tenuipalpis* new to Hungary p. 206 figs.; *H. (H.) ruber prolongatus* p. 208 figs.; *H. (H.) placationis* new to Hungary p. 209, SZALAY 711; *H. (s. str.) ruber ruber* ♀ + ♂ p. 23 figs.; *H. (Polyhyd.) flexuosus* ♀ p. 26 figs., IMAMURA 370.

Hygrobatella (s. str.) *elegantula* sp. nov. ♂ + ♀ Puracé, Colombia p. 504 fig.; *H. (s. str.) longigenitalis* sp. nov. ♂ + ♀ Puracé, Colombia p. 506 figs.; *H. (s. str.) longigenitalis* var. *eleta* var. nov. ♀ Coconuco, Colombia p. 507 figs.; *H. (s. str.) puberula* var. *arcuata* var. nov. ♂ Rio San Juan: ♀ Puracé, Colombia p. 510 figs.; *H. (s. str.) puberula* subsp. *minuta* subsp. nov. ♂ + ♀ Paramo de S. Rafael, Puracé, Colombia p. 511 figs.; *H. (s. str.) puberula* subsp. *validipalpis* subsp. nov. ♀ Rio San Juan, Colombia p. 509; *H. (Polyhygrobatella* subgen. nov.) *polypora* sp. nov. ♀ Rio San Juan, Colombia p. 513 fig.; *H. (P.) polygramma* sp. nov. ♂ + ♀ Coconuco, Colombia p. 514 figs.; *H. (Tetrahygrobatella* subgen. nov.) *dictyoderma* sp. nov. ♀ Coconuco, Colombia p. 512 figs.; *H. (s. str.) papillata* ♀ + ♂ p. 502 figs.; *H. (s. str.) puberula montana* ♀ + ♂ p. 507 figs.; *H.* key to South American species p. 516, LUNDBLAD Ark. Zool. N.S. 5 1954

Hygrobat (s. str.) *amplipalpis* sp. nov. ♂ + ♀ El Tambo, Colombia p. 497 figs.; *H. Hygrobatides distendens* sp. nov. ♂ + ♀ El Tambo, Colombia p. 499 figs.; *H. (s. str.) obtusidens* sp. nov. ♂ + ♀ El Tambo, Colombia p. 495 figs.; *H. (s. str.) sterrodermus* sp. nov. ♂ + ♀ El Tambo, Colombia p. 498 figs.; *H. (s. str.) plebejus* var. *tamboensis* var. nov. ♂ Manchique, Colombia p. 495 figs.; *H. (s. str.) plebejus* ♀ redescribed p. 494 fig.; *H. key* to South American species p. 501, LUNDBLAD Ark. Zool. N.S. 5 1954; *H. (Hygrobatides) angustiporus* sp. nov. ♀ Rio Cururú, Mission, Amazonas p. 127 figs.; *H. diversidentatus* sp. nov. nymph Rio Cururú, Mission, Amazonas p. 126 fig.; *H. apertus apertulus* subsp. nov. ♀ Rio Erereri in Uitasarang: Rio Tapajoz, Pindobal: Igarapé do Lago Iruçanga, Amazonas; *H. apertus* p. 124 fig., VIETS Schweiz. Z. Hydrol. 16 1954; *H. (s. str.) heteropalpis* sp. nov. ♀ Ebéotsu, Asahigawa City, Hokkaido, Japan p. 77 fig.; *H. (Rivobates) taniguchii* sp. nov. ♀ + ♂ River Shokotsu, Kamishokotsu-mura, Hokkaido, Japan p. 84 fig.; *H. (R.) ezoensis* ♂ + ♀ p. 82 fig.; *H. (s. str.) foreli* ♀ + ♂ p. 75 figs.; *H. (s. str.) longipalpis* ♂ + ♀ + N + L p. 79 figs., IMAMURA J. Hokkaido Gakugei Univ. Ser. B. Suppl. No. 1 1954; *H. incurvatus* sp. nov. ♀ Studeny-Bach, Mündung, Slowakei, Czechoslovakia p. 37 fig.; *H. properus* sp. nov. ♀ Fluss Orava, Kralovany, Slowakei, Czechoslovakia p. 36 fig., LASKA Zool. Anz. 152 1954; *H. (Hygrobat) oxyrhynchus* sp. nov. ♂ Pernambuco, Brazil p. 76 figs.; *H. (H.) ampliatus interpositus* subsp. nov. ♂ + ♀ Pernambuco, Brazil p. 70 fig.; *H. (H.) ampliatus productus* ♂ + ♀ p. 72 figs.; *H. (H.) apertus* ♂ + ♀ p. 73 figs.; *H. (H.) lundbladi* ♀ p. 75 figs.; *H. (H.) procursus* ♀ p. 79 fig.; *H. (H.) triangularis* ♂ p. 79 figs.; *H. (Hygrobatides) transversalis* sp. nov. ♀ Pernambuco, Brazil p. 79 figs., VIETS Arch. Hydrobiol. 49 1954.

Hypoaspis incisus sp. nov. deutonym. locality not given p. 86; *H. necroniger* sp. nov. ♀ locality not given p. 87; *H. subglaber* sp. nov. ♀ locality not given p. 87, OUDEMANS Ent. Ber. 1 1903 [Omitted from Z.R. 1903]; *H. neglectus* new to Britain p. 796, EVANS 247.

Indogynium gen. nov. [Schizogyniidae] defined p. 285; type-species *I.*

lindbergi sp. nov. ♀ + ♂ off *Platyplectrurus madurensis*, [Rept.], Mt. Palni, Kodaikanal, Madras also off *Uropeltis pulnejensis* [Rept.] and *Tetrurus rhodogaster* [Rept.] p. 285 figs., SELLNICK Ent. Tidskr. 75 1954.

Iphidosoma multiclavatum sp. nov. nymph Kapruner Tal, Hang, Austria p. 458 fig., WILLMANN S.B. öst. Akad. Wiss., Abt. 1 162 1953.

Iphiseius degenerans ♀ redescribed ♂ described p. 517 figs.; *I.* gen. reviewed and transferred to Phytoseiinae p. 523, EVANS 248.

Ixodes sigalasi sp. nov. ♀ off *Vannellus vannellus*, Montendre, Charente-Maritime, France: also off *Turdus* sp. p. 561 figs.; Key to separate *I. brunneus*, *I. frontalis*, *I. daveyi*, *I. theileri* and *I. sigalasi* p. 567, LAMONTELLERIE Ann. Parasit. hum. comp. 29 1954; *I. laguri laguri*, host list and biology p. 99, EMCHUK 242; *I. (Ixodes) laguri*, larval and nymphal stages p. 73 figs.; *I. (I.) persulcatus* larval and nymphal stages p. 75 figs.; *I. (I.) ricinus* larval and nymphal stages p. 73 figs., FILIPPOVA 260; *I. loricatus vogelsangi* nom. nov. pro *I. loricatus spinosus* Nuttall, 1910 preocc. Neumann, 1899 p. 79, DIAS Moçambique No. 79 1954; *I. nigricans* Neumann 1899 = *I. ricinus* (L.) p. 263, DIAS 209; *I. percavatus* ♀ + N + L redescribed p. 1 figs., ANASTOS 10; *I. ricinus*, structure of scutum p. 266 figs., DANIEL & LUDVIK 196; *I. ricinus* structure of integument p. 241 figs., DANIEL & LUDVIK 197; *I. signatus* ♂ described p. 275 fig., GREGSON 306; *I. (E.) trianguliceps* redescribed larva and nymph p. 1053 figs., FILIPPOVA 261; *I. venezuelensis* ♀ + N redescribed p. 64 fig., VOGELSANG & DIAS 773.

Jugatala (?) *rotunda* sp. nov. Aufstieg, Toten Gebirge, Austria p. 509 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Jugoribates gracilis nymph p. 19 fig., HAMMER 315.

Jurucua gen. nov. [Unionicolidae: Neumaniinae] defined p. 135; type species *J. oblongata* sp. nov. ♂ + ♀ Rio Cururú, Mission: Lago Jurucui, Amazonas p. 135 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Kampimodromus australicus sp. nov. ♀ under *Lecanium* scale on *Euonymus*

sp., Bathurst, New South Wales p. 185 fig., WOMERSLEY Aust. J. Zool. 2 1954.

Kennethiella gen. nov. (Ensliniellidae) defined p. 2; type species *Ensliniella trietolosa* Cooreman 1942 ♂ + ♀ + N + L described p. 3 figs., COOREMAN Bull. Mus. Hist. nat. Belg. 39 37 1954.

Koenikea (*Recifella*) *columbiana* sp. nov. ♀ El Tambo, Colombia p. 554 figs.; *K. Tamboella* subgen. nov. *multisetosa* sp. nov. ♂ El Tambo, Colombia p. 555 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Kongsbergia (*Neokongsbergia* subgen. nov.) *globipalpis* sp. nov. ♂ + ♀ Rio San Juan, Colombia p. 565 figs., LUNDBLAD Ark. Zool. N.S. 5 1954; *K. arenaria* new to Corsica p. 524 figs., ANGELIER 26; *K. enami* ♀ p. 132 fig., IMAMURA 370.

Krendowskia (*Krendowskia*) *rubicunda* sp. nov. ♀ + ♂ Lago Jurueui: Lago Mureta, Amazons p. 162 figs.; *K. (K.) megalopsis* p. 161 fig., VISTS Schweiz. Z. Hydrol. 16 1954.

Labidostomma integrum schoutedeni subsp. nov. Nyakasiba, Kabare, Kivu, Belgian Congo p. 166 figs., COOREMAN Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Laelaps grenieri sp. nov. ♀ off *Lemniscomys striatus*, Brazzaville. French Equatorial Africa also off *Leggada musculoides* p. 439 fig.; *L. lavieri* sp. nov. ♀ off *Leggada musculoides*, Brazzaville. French Equatorial Africa p. 442 fig.; *L. lavoipierrei* sp. nov. ♀ off *Lophuromys sikapusi*, Brazzaville. French Equatorial Africa p. 440 fig.; *L. roubaudi* sp. nov. ♀ off *Dasymys incomtus*, Brazzaville, French Equatorial Africa p. 437 fig.; *L. thamnomyis* sp. nov. ♀ off *Thamnomyis rutilans*, Brazzaville, French Equatorial Africa p. 444 fig., TATFFLEB Ann. Parasit. hum. comp. 29 1954; *L. (Haemolaelaps) manipurensis* sp. nov. ♀ + ♂ off *Rattus r. bullocki*, Kanglatongli cp., Manipur, Assam p. 23 figs., SINHA Rec. Indian Mus. 51 1954; *L. (Laelaps) sminthopsis* sp. nov. ♀ off pouched mouse, *Sminthopsis leucopus*, Gorae, Victoria p. 117 figs., WOMERSLEY Rec. S. Aust. Mus. 11 1954.

Lasioseius zerconoides sp. nov. ♀ Sloupké údolí, Austria p. 225 figs., WILLMANN Českoslov. parasit. 1 1954;

L. leitnerae NOM. NUD. p. 350, FRANK in Spiegel, Land-Tierwelt 1 1954.

Lebertia (s. str.) *apposita* sp. nov. ♀ Oravsky Podzámok, Slovakia p. 159 figs.; *L. (s. str.) pallida* sp. nov. ♂ Stadt Námestovo, Slovakia p. 161 figs.; *L. (s. str.) slovenica* sp. nov. ♀ Zverovka, Tatras, Slovakia p. 163 figs., LÁSKA Zool. Anz. 53 1954; *L. (Septilebertia* subgen. nov.) *brunnea* sp. nov. ♀ + ♂ Chitosé, Sapporo City, Hokkaido, Japan p. 64 fig.; *L. (Pilolebertia) limnea* sp. nov. ♂ + ♀ Nishitappu, Tomakomai City, Hokkaido, Japan p. 59 figs., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954; *L. (Pseudolebertia) corica* sp. nov. ♂ + ♀ Tavignano, Nino; River Aitone, Porto, Corsica p. 98 figs.; *L. (s. str.) maglioi* ♂ + ♀ described p. 94 figs., ANGELIER Vie et Milieu 5 1954; *L. (Lebertia) harenarum* sp. nov. ♀ + ♂ Seibersdorfer-Baches, Austria p. 289 figs.; *L. (L.) longiepipimerata* sp. nov. ♀ Oberlauf des Langwasser-Baches: ♂ Seibersdorfer, Austria p. 290 figs.; *L. (L.) purpurea* sp. nov. ♀ Riesengebirge, Germany p. 287 figs., LÁSKA Mém. Soc. zool. tchéosl. 17 1953; *L. (s. str.) rimboureni* new to Holland p. 186, BESSLING 84.

Ledermülleria ligulata sp. nov. Butnărești raionul Roman, Rumania p. 366 figs.; *L. segnis* redescribed p. 364 figs.; *L.* gen. characterised p. 368, FRIDER Studi Cercet. Stunt. 5 1954.

Ledermülleriopsis triscutata sp. nov. ♂ + ♀ Pinzgau, Austria p. 487 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Leeuwenhoeckia (A.) hirsti p. 239 fig., DERRICK & WOMERSLEY 208.

Leptus absoloni sp. nov. Sloupké údolí, Austria p. 242 figs., WILLMANN Českoslov. parasit. 1 1954.

Liacarus conjunctus sp. nov. Gölt-schach, Kärnten, Austria p. 298 fig.; *L. cuspidatus* sp. nov. Gölt-schach, Kärnten, Austria p. 301 fig.; *L. gracilis* sp. nov. Maria Rain, Kärnten, Austria p. 306 fig.; *L. laterostriis* sp. nov. Austria p. 307 fig.; *L. longilamellatus* sp. nov. Kärnten, Austria p. 304 fig.; *L. coitus* sp. nov. Gölt-schach, Kärnten, Austria p. 302 fig.; *L. parens* sp. nov. Gölt-schach, Kärnten, Austria p. 303 fig.; *L. rotundatus* sp. nov. Gölt-schach, Kärnten, Austria p. 300 fig.; *L. sejunctus* sp. nov.

Göltschach, Kärnten, Austria p. 299 fig., MIHELČIČ Zool. Anz. 153 1954; *L. moraviacus* sp. nov. "Staré Skály," Austria p. 257 fig.; *L. xylariae* p. 256 fig., WILLMANN Českoslov. parasit. 1 1954; *L. sp.* comparison of cast integument with new p. 586 fig., GRANDJEAN 299.

Limnesia (Pilolimnesia) amazonica sp. nov. ♂ + ♀ Igarapé Agua Boa, Amazons p. 113 figs.; *L. angelieri* sp. nov. ♂ + ♀ Rio Cururú, Mission, Lago Cigana: Rio Aniperi, Amazons p. 97 figs.; *L. besselingi* sp. nov. ♀ Rio Cururú, Mission, Amazons p. 99 figs.; *L. browni* sp. nov. ♂ + ♀ Igarapé Mapiri des Rio Tapajóz, Santarem: Cabeceira Verde: Lago Jurucui, Amazons p. 101 figs.; *L. flosculipora* sp. nov. ♂ + ♀ Lago do Tostão, Amazons p. 103 figs.; *L. minutidentata* sp. nov. ♀ Lago Jurucui, Amazons p. 106 figs.; *L. praedentata* sp. nov. ♂ + ♀ Rio São Manoel: Lago Juruena, Lago do Péri: Lago Calado, Amazons p. 107 fig.; *L. semireticulata* sp. nov. ♂ + ♀ Lago Iruçanga, Amazons p. 109 figs.; *L. tenuicozalis* sp. nov. ♀ Lago Matafome, Amazons p. 112 figs.; *L. hesperia porulosa* subsp. nov. ♂ + ♀ Rio Aniperi: Lago Jurucui: Lago Grande Curnay: Rio Acará-pequeno: Lago Mureta, Amazons p. 104 fig.; *L. (Tetralimnesia) sinuosa* sp. nov. ♂ Rio Cururú, Mission, Amazons p. 111 figs.; *L. (L.) brasiliana* p. 121 fig., VIETS Schweiz. Z. Hydrol. 16 1954; *L. (Allolimnesia) bidentata* sp. nov. ♀ Pernambuco, Brazil p. 63 figs.; *L. (Limnesia) amplipora* sp. nov. ♀ Surinam, Dutch Guiana p. 37 figs.; *L. (L.) granuligera* sp. nov. ♂ + ♀ Pernambuco, Brazil p. 41 figs.; *L. (L.) inflatipalpis* sp. nov. ♂ Pernambuco, Brazil p. 47 figs.; *L. (L.) inflectipalpis* sp. nov. ♀ Pernambuco, Brazil p. 48 figs.; *L. (L.) serratipes* sp. nov. ♂ Pernambuco, Brazil p. 56 figs.; *L. (L.) minuscula distorta* subsp. nov. ♂ + ♀ Pernambuco, Brazil p. 53 figs.; *L. (L.) circumcincta* ♂ p. 39 fig.; *L. (L.) laeta* ♂ + ♀ p. 49 figs.; *L. (Allolimnesia) polypora* ♂ + ♀ p. 61 figs.; *L. (Limnesiella) brasiliana* ♀ p. 66 figs.; *L. (Limnesiopsides) pectungulata* ♀ p. 65 fig.; *L. (Pilolimnesia) rostrata* ♂ + ♀ p. 58 figs., VIETS Arch. Hydrobiol. 49 1954; *L. (Limnesiella) eggletoni* sp. nov. ♂ + ♀ + N. Nichol's Bog, Cheboygan Co., Michigan p. 149 figs.; *L. (L.)*

marshallae ♂ + ♀ redescribed p. 148 figs.; *L. (Limnesiopsis) anomala* ♂ + ♀ redescribed p. 146 figs., COOK Psyche, Camb., Mass. 61 1954; *L. (s. str.) iberica* sp. nov. ♂ Sta Gomba Dão, Portugal p. 56, LUNDBLAD Zool. Anz. 153 1954; *L. longipora* sp. nov. ♂ Manchique, Colombia p. 485 figs.; *L. key to South American species* p. 489, LUNDBLAD Ark. Zool. N.S. 5 1954; *L. (s. str.) koenikei* ♀ + ♂ + N + L p. 70 figs., IMAMURA 370; *L. (s. str.) undulata* ♂ described p. 151 fig., IMAMURA 371.

Limnochares (s. str.) aquatica ♂ + ♀ p. 7 figs., IMAMURA 370.

Liponyssus galagus sp. nov. ♀ + ♂ from nests of *Galago senegalensis*, Karamoja, Uganda p. 10 figs.; *L. rose-innesi* sp. nov. ♀ from nest of *Rhabdomys pumilio*, Goshen, Cape Province p. 8 figs., ZUMPT & TILL S. Afr. J. med. Sci. 18 1953; *L. tiniae* sp. nov. ♂ + ♀ off *Rhinolophus ferrum equinum*, Grotta Grande di Pignona, La Spezia, Italy p. 182 fig., LOMBARDINI Redia 38 1953.

Listrophoroides oryzomys sp. nov. ♂ + ♀ off mouse, *Oryzomys p. palustris*, Brady Co., Georgia, U.S.A. p. 597 fig., RADFORD Riv. Parassit. 15 1954.

Listrophorus grassii sp. nov. ♂ + ♀ off mouse, *Oryzomys p. palustris*, Brady Co., Georgia, U.S.A. p. 594 fig.; *L. theodori* sp. nov. ♂ + ♀ off gerbil, *Meriones l. libycus*, Tel Amal, Beisan, Israel p. 596 fig., RADFORD Riv. Parassit. 15 1954; *L. leuckarti*, internal anatomy p. 239 figs., HUGHES 365.

Lobohalacarus dolgarae sp. nov. ♀ + ♂ Lake Windermere, Westmorland p. 669 figs., GREEN Proc. zool. Soc. Lond. 124 1954.

Longicheles subgen. nov. see *Geholapis*, VALLE 756.

Lundbladia petrophila duplicata subsp. nov. ♂ + ♀ Case Vecchie, Corsica p. 305 figs., VIETS Zool. Anz. 152 1954.

Mackerrasiella gen. nov. [Leeuwenhoekidae: Apoloniinae] defined p. 109 and 112; type species *M. globus* sp. nov. larva off Dolichopodid flies, Merbein, Victoria p. 112 figs., WOMERSLEY Stud. Inst. med. Res. F.M.S. No. 26 1954.

Mackiena todayi sp. nov. larva off brown-eared bulbul, *Microscelis a. amaurotic*, Nankan-Machi, Kumamoto,

Kyushu, Japan; also off *Trogloodytes t. utanoi* and off *Emberiza spodocephala personata* p. 200 figs., KAMO Kyushu Mem. med. Sci. 4 1953.

Mamersonia gen. nov. [Anisitsiellidae] defined p. 95; type species *M. amazonica* sp. nov. ♀ Lago do Caxias, Amazons p. 96 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Marquesania imbricata sp. nov. ♀ off *Lemniscomys griselda zuluensis*, Kosi Bay, Zululand p. 38 fig.; *M. womersleyi* additions to description p. 40, LAWRENCE J. ent. Soc. S. Afr. 17 1954.

Megaliphis minor sp. nov. ♀ Grieswiesalm, Austria p. 456 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Mehracula gen. nov. [Trombiculidae] p. 332; type species *M. roonwali* sp. nov. larva off tree shrew, *Tupaia belangeri*, Manipur-Taru Road, Assam p. 229 fig.; *M. radfordi* sp. nov. larva off crab-eating mongoose, *Herpestes urva* and squirrel, *Dremomys macmillani*, Madbung Village, and Dimapur-Imphal Road, Assam p. 330 fig., SINHA Parasitology 44 1954.

Melanozetes interruptus sp. nov. Granatspitzgruppe, N-Hang, Austria p. 508 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Metelbelba sphagni sp. nov. Sandkatener Moor, Plön, Germany p. 63 figs., STRENZKE Schr. naturw. Ver. Schl.-Holst. 24 1950.

Mideopsis (*Neoxystonotus*) *curvipes* sp. nov. ♂ Lago Jurucui, Amazons p. 147 figs.; *M. gradatipalpis* sp. nov. ♀ Rio Cucuru, Mission: Lago do Jacaré; Lago Jurucui, Lago de Flechal; Lago Jurucui, Amazons p. 148 fig.; *M. infractipalpis* sp. nov. ♀ Lago Jurucui, Amazons p. 149 fig.; *M. singularis* sp. nov. ♀ Rio Branco de Obidos, Amazons p. 150 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *M. (Mideopsis ?) microdactylus* sp. nov. ♀ Pernambuco, Brazil p. 121 figs.; *M. (M.) elongata* ♂ p. 124 figs.; *M. (M.) ovum* ♀ p. 123 fig.; *M. (Neoxystonotus) biverrucata* sp. nov. ♂ + ♀ Pernambuco, Brazil p. 125 figs.; *M. (N.) trilobata remotipora* subsp. nov. ♂ Pernambuco, Brazil p. 135 figs.; *M. (N.) trilobata vicinipora* subsp. nov. ♂ Pernambuco, Brazil p. 137 figs.; *M. (N.) trilobata* ♂ + ♀ p. 129 figs.; *M. (N.) maculata* ♂ p. 127 fig., VIETS Arch.

Hydrobiol. 49 1954; *M. key* to South American species p. 571, LUNDBLAD 472.

Momonides lundbladi new to Corsica p. 525 figs., ANGELIER 26.

Monunguis syn. of *Neotrombidium* p. 89, SOUTHCOTT 689.

Motasia gen. nov. [Hygrobatidae] defined p. 526; type species *M. placoderma* sp. nov. ♀ Coconuco, Colombo p. 526 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Myrmonyssus phalaenodectes sp. nov. ♀ + ♂ from *Pseudaletia unipuncta* (Phalaenid. Lept.), Tyngham, Massachusetts: life history and ecology p. 619 figs., TREAT J. Parasit. 40 1954.

Najadicola ingens p. 471 figs., VIETS & PLATE 767.

Nalepella tsugifoliae sp. nov. ♀ + ♂ off *Tsuga canadensis*, Richmond, Virginia p. 65 figs., KEIFER Bull. Dept. Agric. Calif. 85 1953.

Nematolycus gen. nov. [Nematolycidae] defined p. 638; type species *N. nematoides* sp. nov. Sidi Ferruch, Algeria p. 639 figs., STRENZKE Vie et Milieu 4 1954.

Neoalbia (*Neoalbiella* subgen. nov.) *octopora* sp. nov. ♀ Rio Tapajóz, Bucht Mapiri, Amazons p. 145 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Neoalbiella subgen. nov. see *Neoalbia*, VIETS 765.

Neoatractides formosus ♂ + ♀ redescribed p. 474 figs.; *N. inachus* ♀ + ♂ redescribed p. 472 figs., LUNDBLAD 472.

Neotaurus caudatus sp. nov. ♂ + ♀ Rio San Juan, Colombia p. 566 figs.; *N. key* to South American species p. 570, LUNDBLAD Ark. Zool. N.S. 5 1954.

Neocalonyx (s. str.) *pectunguis* sp. nov. ♂ + ♀ El Tambo, Colombia p. 444 figs.; *N. key* to South American species p. 446, LUNDBLAD Ark. Zool. N.S. 5 1954.

Neocheylyus nidicolus sp. nov. from nest of weaver-bird, Karamoja, Uganda p. 74 fig., LAWRENCE Ann. Natal Mus. 13 1954.

Neocorticacarus gen. nov. [Hygrobatidae] defined p. 524; type species *N. validipalpis* sp. nov. ♂ + ♀ Coconuco,

Colombia p. 524 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Neochoronyssus (Hirstionyssus) mato-grosso sp. nov. ♀ off rat, *Cercomys cunicularius forsteri*, Taunay, Mato Grosso, Brazil p. 79 figs., FONSECA Rev. Brasil. Ent. 1 1954.

Neokongsbergia subgen. nov. see *Kongsbergia*, LUNDBLAD 472.

Neolimnochares pugiunculata sp. nov. ♂ Rio Tapajóz, Pindobal, Amazons p. 90 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Neoliponyssus myrmecophagus sp. nov. ♀ + ♂ off anteater, *Myrmecophaga t. tridactyla*, Ribas de Rio Pardo, Mato Grosso and Maracaju, Mato Grosso, Brazil p. 84 figs., FONSECA Rev. Brasil. Ent. 1 1954.

Neomamersa gen. nov. [Neomamersidae] type species *N. unicipalpis* sp. nov. ♀ Manchique, Colombia p. 447 figs., LUNDBLAD Ark. Zool. n.s. 5 1954.

Neoribates neglectus sp. nov. ♂ + ♀ Dorf Fusch, Austria p. 513 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Neoschöngastia americana redescribed p. 266 fig.; *N. asakawai* redescribed p. 264 fig.; *N. carveri* redescribed p. 270 fig.; *N. monticola* redescribed p. 273 fig.; *N. paenitans* redescribed p. 270 fig.; *N. posekanyi* redescribed p. 266 fig.; key to Japanese species p. 263, SASA & JAMESON 646; *N. asakawai* sp. nov. larva off *Scolopax r. rusticola* and *Banbusicola t. thoracica*, Shiitori-Shrine, Mount Oyama, Miyake-jima Id., Japan p. 11 figs.; *N. okumurai* sp. nov. larva off *Monticola solitarius magnus*, Shiitori-Shrine, Mt. Oyama, Miyake-jima, Japan p. 6 figs., FUKUZUMI & OBATA Kitasato Arch. exp. Med. 26 1953; *N. yemenensis* sp. nov. larva off *Meriones rex buryi*, Ta'izz, Yemen p. 305 fig., RADFORD Fieldiana, Zool. 34 1954; *N. xerothermobia* new to Austria p. 90, КЕРКА 406.

Neotorrenticola bidens sp. nov. ♀ Coconuco: ♂ Puracé, Colombia p. 482 figs.; *N. crassipes* sp. nov. ♀ Coconuco, Colombia p. 479 fig.; *N. papillata* sp. nov. ♀ Puracé, Colombia p. 484 figs.; *N. plumipes* sp. nov. ♀ Rio San Juan, Colombia p. 477 figs.; *N. walteri* sp. nov. ♀ + ♂ Rio San Juan, Colombia p. 480 figs.; *N.* key to South American

species p. 485, LUNDBLAD Ark. Zool. N.S. 5 1954.

Neotrombicula saperoi sp. nov. larva off *Rattus r. rattus*, Ta'izz, Yemen p. 296 fig., RADFORD Fieldiana, Zool. 34 1954.

Neotrombidium barringtonense, ovum and larva described, additional localities of adults, biology p. 90 figs., SOUTHCOTT 689.

Neotyrrhelia polyphora sp. nov. ♀ Puracé, Colombia p. 493 figs.; *N. recurva* sp. nov. ♂ + ♀ Manchique, Colombia p. 491 figs., LUNDBLAD Ark. zool. N.S. 5 1954.

Neumania (s. str. ?) *japonica* sp. nov. ♀ Kakizaki-machi, Kakakubiki-gun, Niigata, Japan p. 158 fig.; *N.* (s. str.) *satoi* sp. nov. ♂ Kokuni-mura, Kariha-gun, Niigata, Japan p. 160 fig.; *N.* (s. str.) *ambigua* ♀ p. 156 fig., IMAMURA J. HOKKAIDO Gakugei Univ. Sect. B. Suppl. No. 1 1954; *N. (Tetraneumania) circummarginata* sp. nov. ♂ + ♀ Pernambuco, Brazil p. 93 figs.; *N. (T.) paupercula* sp. nov. ♀ Pernambuco, Brazil p. 95 fig., VIETS Arch. Hygrobiol. 49 1954; *N. phreaticola* new to Corsica p. 522 figs., ANGELIER 26; *N.* (s. str.) *vietsi* ♂ + ♀ redescribed p. 144 figs., ANGELIER 27.

Nothotrombicula deinacridae larva redescribed p. 109 figs., WOMERSLEY 808.

Nothotrombidium gen. nov. [Trombellinae] defined p. 125; type species *Trombella otiorum* Berlese 1902 p. 125; also included *Trombella lundbladi* Willmann 1939 p. 122, WOMERSLEY Rec. S. Aust. Mus. 11 1954.

Nycteridocoptes poppei ♂ described off *Myotis myotis*, Grottes de Zuid-Limburg, Holland p. 140 figs., EYNDHOVEN 250.

Oppia duffyi sp. nov. The Burren, Co. Clare, Eire p. 806 figs., EVANS Proc. zool. Soc. Lond. 123 1954.

Oribatula coggii nom. nov. pro *Oribates tibialis* Berlese 1896 non Nicolet 1855 p. 420, JACOT Trans. Amer. micr. Soc. 48 1929. [Omitted from Z.R. 1930 No. 152.]

Oribella paolii redescribed p. 807 figs.; *O. paolii multidentata* subsp. nov. Holstein, Germany p. 809 figs., EVANS Proc. zool. Soc. Lond. 123 1954.

Ornithodoros erraticus variation and hybridation p. 89 figs., CHABAUD 147;

O. erraticus, distribution and biology p. 127, HOOGSTRAAL et al. 359; *O. moubata*, list of hosts in Mosambique p. 635, DIAS 212; *O. sp.* on Puffin Id., Anglesey, new to Britain p. 936, HOBART & WHALLEY 338.

Otocentor Cooley 1938 = *Anocentor* Schulze 1937 p. 499, ARAGÃO & FONSECA 32.

Oxus lusitanicus sp. nov. ♂ Rio Côa, Portugal p. 155, LUNDBLAD Zool. Anz. 153 1954; *O. schubarti sp. nov.* ♀ Pernambuco, Brazil p. 36 figs.; *O. gracilipalpis aequalipilis subsp. nov.* Pernambuco, Brazil p. 36 figs.; *O. acutirostris sp. 34 figs.*; *O. crassipes sp. 35 figs.*, VIETS Arch. Hydrobiol. 49 1954; *O. longisetus* ♀ p. 149 fig., IMAMURA 371; *O. magnus* ♀ + ♂ p. 66 figs., IMAMURA 370.

Oxypleurites acerivagrans sp. nov. ♀ off *Acer macrophyllum* (Aceraceae), Solano Co., California p. 66 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953.

Pachygnathus arhinosis sp. nov. ♀ Gesäuse, Austria p. 478 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Pachylaelaps alpinus sp. nov. ♂ + ♀ Glocknergruppe, Austria p. 459 figs., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953; *P. (Onchodellus) vexillifer* Willmann NOM. NUD. p. 347, FRANZ in Spiegel, Land-Tierwelt 1 1954.

Palaeacarus hystericinus subsp. västerbottensis subsp. nov. ♀ Degerfors, Svartberget, Prov. Vasterbotten, Sweden p. 212 figs.; *P. hystericinus* re-described p. 199 figs., GRANDJEAN Mém. Mus. Hist. nat. Paris ser. A Zool. 7 1954.

Parachipteria punctata p. 210 figs.; *P. willmanni* p. 210 figs., GRANDJEAN 297.

Paracorticacarus subgen. nov. see *Corticacarus*, LUNDBLAD 472.

Paraphytoptus arceuthobii sp. nov. ♀ off *Arceuthobium campylopodium* (Loranthaceae), El Dorado Co., California p. 68 figs., KEIFER Bull. Dept. Agric. Calif. 41 1952.

Parasitus burchanensis sp. nov. ♂ locality not given p. 86; *P. crinitus sp. nov.* deutonym. locality not given p. 85; *P. poppei sp. nov.* deutonym. off *Talpa europaea* and *Mus sylvaticus*, Holland p. 85, OUDEMANS Ent. Ber. 1 1903 [Omitted from Z.R. 1903]; *P. sloupensis sp. nov.* ♂ + ♀ Sloupské

údoli, Höhle "Staré Skály," Austria p. 214 fig., WILLMANN Českoslov. parasit. 1 1954; *P. vertacomiriensis sp. nov.* ♂ Grotte Merveilleuse Inférieure, Vercors méridional, France p. 2 figs., COOREMAN Bull. Mus. Hist. nat. Belg. 30 34 1954.

Paratetranychus hondoensis sp. nov. ♂ + ♀ off Japanese cedar, *Cryptomeria japonica*, Sibusawa, Kanagawa Pref., Japan p. 102 figs.; *P. inoue sp. nov.* ♂ + ♀ off ezo-spruce, *Picea jezoensis*, Hokkaido, Kawayu, Kushirokoku Prov., also off todo-fir *Abies Mayriana* p. 104 figs., EHARA Annot. zool. jap. 27 1954; *P. mcgregori sp. nov.* ♂ off cotton, Chinandega, Nicaragua: ♀ Managua, Nicaragua p. 209 figs.; *P. gossypii* p. 209 fig.; *P. stenoperitrematis* Ugarov and Nikolskii comb. nov. p. 209, BAKER & PRITCHARD Hilgardia 22 1953; *P. pilosus* p. 245 figs., VERGANI 762.

Paraustriobates gen. nov. [Hygrobatidae] defined p. 517; type species *P. columbianus sp. nov.* ♀ Coconuco, Columbia p. 517 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Parawandesia chappuisi new to Corsica p. 515 figs., ANGELIER 26.

Partnunia steinmanni new to Czechoslovakia p. 286 figs., LÁSKA 435; *P. uchidai* ♀ p. 22 fig., IMAMURA 370.

Passalozetes intermedius sp. nov. Kärnten, Austria p. 167 fig., MIHELČIČ Zool. Anz. 153 1954.

Pegreffia gen. nov. [Pyemotidae] defined p. 190; type species *P. pegreffii sp. nov.* ♀ + ♂ in respiratory tract of swallow, S. Vito nel Sarabus, Sardinia p. 190 figs., LOMBARDINI Redia 38 1953.

Pelops brevicuspis sp. nov. Blankenburg, Germany p. 216 fig.; *P. hygrophilus sp. nov.* Dümmer, Germany p. 217 figs.; *P. strenzkei sp. nov.* Dümmer, Germany p. 218 figs., KNÜLLE Zool. Anz. 153 1954; *P. kochi* nom. nov. pro *Pelops hirsutus* C. L. Koch 1844 non C. L. Koch 1842 p. 418, JACOT Trans. Amer. micr. Soc. 48 1929 [Omitted from Z.R. 1930 No. 152].

Pergamasus crassicornutus sp. nov. ♂ Sloupské údolí, Austria p. 219 figs., WILLMANN Českoslov. parasit. 1 1954; *P. monticola sp. nov.* ♂ + ♀ Mölltal, Austria p. 451 figs.; *P. similis sp. nov.* ♂ + ♀ N-Hang des Mölltales, Austria p. 449 figs.; *P. symmetricus sp. nov.* ♂

Bösensteingipfel, SW-Hang, Austria p. 454 figs.; *P. unidentatus* sp. nov. ♂ + ♀ Kalbling-Sparafeld, Austria p. 452 figs.; *P. noster* var. *simplex* var. nov. ♂ Gipfel des Unterbérgeres, S-Hang, Austria p. 455 figs., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953; *P. paripes* sp. nov. ♀ Ainsdale, Lancashire, England p. 40, HULL Lancs. & Cheshire Nat. 1918 [Omitted from Z.R. 1918]; *P. alpestris* ♀ p. 5 figs., COOREMAN 179; *P. crassicornutus* Willmann NOM. NUD. p. 334, FRANZ in Spiegel, Land-Tierwelt 1 1954.

Permycobates gen. nov. [Ceratozetidae] defined p. 92; type species *P. bicornis* sp. nov. Black Forest, Southern Germany p. 92 figs., STRENZKE Proc. K. Akad. Amst. 57C 1954.

Petrobia latens p. 206 figs., BAKER & PRITCHARD 56.

Phthiracarus minimarginatus sp. nov. Boulder Co., Colorado p. 198 figs.; *P.* key to species p. 197, WOOLLEY Amer. Midl. Nat. 52 1954; *P. pannonicus* Willmann NOM. NUD. p. 440, FRANZ in Spiegel, Land-Tierwelt 1 1954; *P. peristomaticus* sp. nov. "Krumtsin," Prostějov, Austria p. 263 fig., WILLMANN Českoslov. parasit. 1 1954.

Phyllocoptes arceuthi sp. nov. ♀ + ♂ off *Juniperus occidentalis* (Cupressaceae), El Dorado Co., California p. 70 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953; *P. didelphis* sp. nov. ♀ + ♂ off *Populus tremuloides* (Salicaceae), El Dorado Co., California p. 125 figs., KEIFER Bull. Dept. Agric. Calif. 43 1954.

Phyllocoptiruta oleivorus p. 226 figs., VERGANI 762.

Phytoptus garryana sp. nov. ♀ off *Garrya elliptica* (Garryaceae), Lake Co., California p. 122 figs.; *P. montanus* sp. nov. ♀ off *Carex subfusca* (Cyperaceae), Glenn Co., California p. 121 figs.; *P. yuccae* sp. nov. ♀ off *Yucca glauca* (Liliaceae), Syracuse, Kansas p. 121 figs., KEIFER Bull. Dept. Agric. Calif. 43 1954.

Phytoseius macropilis new to Australia p. 187 fig., WOMERSLEY 804.

Piona aculeatipalpis sp. nov. nymph Igarapé Laguinho: Rio Aniperi, Amazons p. 138 fig.; *P. amazonica* sp. nov. ♂ Lago do Caxias, Amazons p. 139 figs.; *P. rectimarginata* sp. nov. ♀ Lago Salgado, Cabeceira do Molha, Amazons p. 140 fig.; *P. tenuipalpis* sp. nov. ♀

Salgado, Amazons p. 141 fig.; *P. unidens* sp. nov. ♀ Santarem, Laguinho, Amazons p. 142 fig., VIETS Schweiz. Z. Hydrol. 16 1954; *P. novae-zealandiae* sp. nov. ♀ + N + L, Wainui-o-mata Reservoir; Maramau lagoon, South Wairarapa; Matthews stream, South Wairarapa; Tahora pool, South Wairarapa, New Zealand p. 433 figs.; *P. novae-zealandiae* life history p. 459 figs., STOUT Trans. roy. Soc. N.Z. 81 1953; *P. (Piona) punctatissima* sp. nov. ♀ Pernambuco, Brazil p. 110 figs.; *P. (P. ?) oxyura* sp. nov. ♂ Dutch Guiana p. 103 figs.; *P. (P. ?) plenipalpis* sp. nov. ♂ Pernambuco, Brazil p. 107 figs.; *P. (P. ?) robustipalpis* sp. nov. ♂ + ♀ Dutch Guiana p. 112 figs.; *P. (P.) rotunda acutipes* subsp. nov. Pernambuco, Brazil p. 115 fig.; *P. (P.) dejecta* ♂ + ♀ p. 100 figs.; *P. (P.) praegracilis* ♂ p. 109 figs., VIETS Arch. Hydrobiol. 49 1954; *P. (P.) ambigua* new to Hungary p. 210 fig.; *P. (P.) ambigua* var. *laminata* p. 211 fig.; *P. (P.) nodata* p. 209 fig.; *P. (P.) nodata* var. *lacerata* new to Hungary p. 209 fig., SZALAY 711; *P. (P.) carnea* ♀ + ♂ redescribed p. 709 figs., IMAMURA 372; *P. (s. str.) carnea* larva p. 109 fig.; *P. (s. str.) rotunda* ♂ + ♀ + L p. 111 figs., IMAMURA 370.

Pionacercus (s. str.) *japonicus* sp. nov. ♂ + N. Kokuni-mura, Kariha-gun, Niigata, Japan p. 161 figs., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954.

Platyphytoptus eldoradensis sp. nov. ♀ off *Pinus ponderosa*, El Dorado Co., California p. 124 figs., KEIFER Bull. Dept. Agric. Calif. 43 1954; *P. monophyllae* sp. nov. ♀ off *Pinus monophylla*, Alpine Co., California p. 70 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953.

Platytrombidium homocomum var. *moravica* var. nov. ♀ "Staré-Skaly," Austria p. 239 fig., WILLMANN Českoslov. parasit. 1 1954.

Pneumolaelaps marginalis sp. nov. ♀ off *Bombus mucidus* Haller Mauern, Austria p. 467 figs., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Pneumonyssus bakeri sp. nov. ♀ off *Tamiasciurus douglasii mollipilosus*, Humboldt Co., California p. 35 figs.; *P. caninum* ♂ described off dog, California p. 33 figs.; *P. congoensis* ♀ re-

described p. 37 figs.; *P. prociens* ♂ + ♀ redescribed p. 40; *P. key* to species p. 33, FURMAN J. Parasit. 40 1954; *P. mossambicensis* sp. nov. ♂ - ♀ from lung of baboon, *Papio ursinus*, Chicualacuala, Mozambique p. 205 figs.; *P. santos-diasi* sp. nov. ♂ + ♀ from monkey, *Cercopithecus aethiops*, Bedford, Cape Province also from *Papio ursinus* Chicualacuala, Mozambique p. 208 figs.; *P. key* to species p. 197; *P. notes* on species p. 204, ZUMPT & TILL J. ent. Soc. S. Afr. 17 1954; *P. caninum* p. 300 fig., OLDS 546; *P. congoensis* ♀ + ♂ redescribed p. 187 figs.; *P. list* of species of Belgian Congo p. 191, FAIN 254.

Polyaspis berlesii sp. nov. ♀ Egypt also Portugal p. 26 figs., CAMIN Bull. Chicago Acad. Sci. 10 1954.

Polyazonopsella polypora sp. nov. ♀ Manrique, Colombia p. 559 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Polycorticacarellus subgen. nov. see *Corticacarus*, LUNDBLAD 472.

Polyhygrobatella subgen. nov. *Hygrobatella* p. 513, LUNDBLAD 472.

Polyaspinus higginsii sp. nov. ♀ Preston, Idaho p. 35 figs., CAMIN Bull. Chicago Acad. Sci. 10 1954.

Porobelba spinosus variation p. 484 figs., GRANDJEAN 238.

Porohalacarus alpinus new to Great Britain p. 669, GREEN 305.

Porolohmannella violacea new to Corsica p. 534 figs., ANGELIER 26.

Posthermannia gen. nov. [Nanhermannidae] defined p. 298; type species *P. nematophora* sp. nov. Ales, Gard, France p. 298 figs., GRANDJEAN Rev. franç. Entom. 21 1954.

Protomyobia claparedei p. 243 fig., RADFORD 588.

Protoribates austriacus sp. nov. Admont, Austria p. 506 fig.; *P. novus* sp. nov. Glockengruppe, Austria p. 504 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. I 162 1953; *P. capucinus* new to Britain p. 809, EVANS 247.

Protzia annularis sp. nov. ♀ Algeciras, South Spain p. 154; *P. octopora* sp. nov. ♂ Bussaco, Spain p. 155, LUNDBLAD Zool. Anz. 153 1954; *P. caucasica* ♂ + ♀ p. 12 figs.; *P. eximia* ♂ + ♀ p. 15 figs., IMAMURA 370.

Psammotorrenticola gracilis new to Corsica p. 517 figs., ANGELIER 26.

Pseudoschöngastia Lipovsky 1951 synonym of *Euschöngastia* Ewing 1938, p. 121, WOMERSLEY 809.

Pseudotorrenticola quinquescutata sp. nov. ♂ Granada, Spain p. 155, LUNDBLAD Zool. Anz. 153 1954; *P. rhynchota* p. 514 fig., LÁSKA 436.

Psorergates oris on sheep, Ohio p. 117 figs., BELL ET AL. 79.

Pterodectes andréi sp. nov. ♂ + ♀ off black-headed Tchagra, *Tchagra senegalus*, Maringua, Mozambique p. 86 figs.; *P. buttikeri* sp. nov. ♂ + ♀ off spectacled weaver, *Hyphanturgus ocularius*, Maringua, Mozambique p. 89 figs.; *P. rhodesiensis* sp. nov. ♂ + ♀ off *Riparia paludicola*, Sabi + Lundi Rivers, S. Rhodesia p. 90 figs.; *P. sabiensis* sp. nov. ♂ + ♀ off Southern Helmet Shrike, *Prionops plumatus*, Sabi and Lundi Rivers, S. Rhodesia p. 94 figs.; *P. zumptii* sp. nov. ♂ + ♀ off *Lamprocolius corrusca*, Chefu River, Mozambique p. 96 figs., TILL Moçambique No. 79 1954.

Pterygosoma texana ♀ + ♂ + N + L p. 95 figs., LANE 431.

Radfordia forcipifer sp. nov. ♀ + ♂ off *Taatera brantsii*, Kosi Bay, Zululand p. 43 figs., LAWRENCE J. ent. Soc. S. Afr. 17 1954.

Retetydeus catenulatus new to Britain p. 801, EVANS 247.

Rhagidia alpina Willmann NOM. NUD. p. 363, FRANZ in Spiegel, Land-Tierwelt 1 1954; *R. strouhali* p. 481 figs., WILLMANN 800.

Rheolimnesia gen. nov. [Limnesiidae] defined p. 487; type species *R. motasi* sp. nov. ♀ El Tambo, Colombia p. 487 figs., LUNDBLAD Ark. Zool. N.S. 5 1954.

Rhipicephalus hurti sp. nov. ♂ + ♀ off buffalo, Karati Forest, Naivasha, Kenya p. 277 figs., WILSON Parasitology 44 1954; *R. hurti* ♂ + ♀ redescribed p. 6 figs., DIAS 217; *R. distinctus* ♂ + ♀ new to Mosambique p. 297 figs., DIAS 221; *R. bursa* ♂ + ♀ redescribed new to Madeira p. 265 figs.; *R. lundbladi* = *R. bursa* p. 272 fig.; *R. sanguineus sanguineus* new to Madeira p. 265, DIAS 209; *R. bursa* ♂ + ♀ + N + L redescribed p. 201 figs., FELDMAN-

MUHSAM 256; *R. appendiculatus* teratology p. 2265 fig.; *R. maculatus* teratology p. 2265 figs.; *R. s. sanguineus* teratology p. 2266 fig.; *R. simus simus* teratology p. 2267 figs.; *R. tricusps* teratology p. 2270 fig., DIAS 210; *R.* study of group *simus*, sub-group *planus* nov. for *R. planus planus* p. 55 figs.; *R. planus complanatus* p. 56 figs.; *R. reichenowi* p. 57 figs., and *R. zumpti* p. 58 figs.; key to these species p. 59, DIAS 213.

Rhizoglyphus hyacinthi p. 232 figs., VERGANI 762.

Rhynchobelba inexpectata sp. nov. Glockengruppe, Austria p. 501 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Rhyncholimnochares andina sp. nov. nymph, Rio San Juan, Colombia p. 442 figs.; *R. gracilirostris* sp. nov. ♂ El Tambo, Colombia p. 441 figs.; *R. longipalpis* sp. nov. ♂ + ♀ El Tambo, Colombia p. 439 figs.; *R.* key to South American species p. 443, LUNDBLAD Ark. Zool. N.S. 5 1954.

Rhynchotarsonemus gen. nov. [Tarsonemidae] defined p. 1221; type species *R. niger* sp. nov. ♂ off *Quercus lobata*, San Mateo Co., California, ♀ off *Hydrangea quercifolia*, Hayward, California p. 1221 figs., BEER Kansas Univ. Sci. Bull. 36 1954.

Roqueella (*Decaroqueella* subgen. nov.) *actinophora* sp. nov. ♂ Pernambuco, Brazil p. 151 figs.; *R. (R.) lenzi* ♀ p. 149 figs., VIETS Arch. Hydrobiol. 49 1954; *R. (Pararoqueella) conimaxillaris* sp. nov. ♀ Boca Igarapé Ingatuba, Amazons p. 167 figs.; *R. (P.) papillata* sp. nov. ♂ + ♀ Lesser Igarapé, Santarem, Amazons p. 168 figs.; *R. (Neoroqueella) lundbladi* sp. nov. ♀ Igarapé São Benedito: Igarapé Salgadinho, Amazons p. 169 figs., VIETS Schweiz. Z. Hydrol. 16 1954.

Rosensteinia sieversi p. 89 figs., COOREMAN 383.

Sauriscus Lawrence 1949 synonym of *Tecomatlana* Hoffmann 1947, p. 121, WOMERSLEY 809.

Schelorbates fimbriatus sp. nov. ♀ Turkestan p. 196 figs., THOR Zool. Anz. 88 1930 [Omitted from Z.R. 1930 No. 316]; *S. madrasensis* NOM. NUD. Madras, intermediate host of *Moniezia* p. 155 fig., ANANTARAMAN Sci. & Cult. 17 1951.

Schizotetranychus (s. str.) *smirnovi* sp. nov. ♀ + ♂ off *Prunus armeniaca*, Chimkent, South Kazakhstan p. 563 fig.; *S. (s. str.) textor* sp. nov. ♀ + ♂ off *Eleagnus angustifolia*, Chimkent, South Kazakhstan p. 563 fig.; *S. (Eotetranychus) latifrons* sp. nov. ♀ + ♂ off *Rosa* sp., Chimkent, South Kazakhstan p. 562 fig., VAINSHTEIN Zool. Zh. 33 1954.

Schöngastia radfordi sp. nov. larva off *Arvicanthus abyssinicus*, Astrida, Belgian Congo; also off *Dasymys bentleyae* p. 198 figs., JADIN & VERCAMMEN-GRANDJEAN Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Schoutedenicchia gen. nov. [Trombididae: Walchiinae] defined p. 195; type species *S. fulleri* sp. nov. larva off *Arvicanthus abyssinicus*, Musha, Astrida, Belgian Congo p. 203 figs., JADIN & VERCAMMEN-GRANDJEAN Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954.

Schubartella longipes ♂ p. 83 figs., VIETS 764.

Scutovertex alpinus sp. nov. Grosser Buchstein, Austria p. 503 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Septlebertia subgen. nov. see *Lebertia*, IMAMURA 370.

Speleognathopsis gen. nov. [Speleognathidae] p. 428; type species *S. galli* sp. nov. off *Gallus gallus*, Astrida, Belgian Congo p. 429 figs., COOREMAN Ann. Parasit. hum. comp. 29 1954.

Speleognathus striatus and *S. sturni* to *Boydara* q.v., WOMERSLEY 810.

Sperchon (*Mixosperchon*) *andinus* sp. nov. ♀ + ♂ El Tambo, Colombia p. 452 figs.; *S. (M.) motasi* sp. nov. ♂ + ♀ Rio San Juan, Colombia p. 450 figs.; *S.* key to South American species p. 454, LUNDBLAD Ark. Zool. N.S. 5 1954; *S. brevirostris* subsp. *scabriosus* subsp. nov. ♀ + ♂ Little River, Grand Falls, New Brunswick p. 8; *S. glandulosus canadensis* subsp. nov. Canada p. 8; *S. glandulosus thienemanni* subsp. nov. Canada p. 8; *S. plumifer* subsp. *acadiensis* subsp. nov. ♀ + ♂ Little River, Grand Falls, New Brunswick p. 8, HABEEB Leaflets Acadian Biol. No. 1 1953; *S. (s. str.) ezoensis* sp. nov. ♂ + ♀ + N. River Ishikari, Sôunkyo, Hokkaido, Japan p. 43 figs.; *S. (s. str.)*

souunkyo sp. nov. ♀ River Ishikari, Sôunkyo, Hokkaido, Japan p. 48 fig.; *S. (Mixosperchon?) spinosus* sp. nov. ♂ River Ishikari, Sôunkyo, Hokkaido, Japan p. 57 fig.; *S. (s. str.) brevirostris* ♂ + ♀ + N. p. 39 figs.; *S. (H.) plumifer plumifer* ♀ p. 50 fig.; *S. (H.) plumifer* var. *danubialis* nymph. p. 52 fig. *S. (H.) setiger* ♀ + N. p. 53 figs., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954; *S. (Mixosperchon) meridians* sp. nov. ♂ Golo, Pontecastilla, Corsica p. 90 figs.; *S. (H.) denticulatus* subsp. *hibernicus* ♂ p. 88 figs., ANGELIER Vie et Milieu 5 1954; *S. (H.) brasiliensis* p. 34 fig., VIETS 764.

Sperchonopsis verrucosa nymph p. 37 fig., IMAMURA 370.

Sphaerozetes italiensis nom. nov. pro *Oribates orbicularis* Berlese 1883 non C. L. Koch 1835 p. 419, JACOT Trans. Amer. micr. Soc. 48 1929 [Omitted from Z.R. 1930 No. 152]; *S. maximus* sp. nov. Geierkogel, Niederen Tauern, Austria p. 509 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Spinturnix scotophilii sp. nov. ♀ + ♂ off bat, *Scotophilus murinoflavus*, Torit, Anglo-Egyptian Sudan p. 214 figs.; *S. walkerae* sp. nov. ♀ + ♂ off bat, *Pipistrellus n. nanus*, Muhoroni, Kenya p. 216 figs., ZUMPT & TILL Rev. Ecuat. Ent. Par. 2 1954.

Steatonysus eos sp. nov. ♀ + ♂ off *Pipistrellus nanus*, Muhoroni, Kenya p. 55 figs.; *S. similis* sp. nov. ♀ off sparrow weaver, *Plocepasser mahali*, Potchefstroom, Transvaal p. 50 figs.; *S. nyassae* p. 49 figs.; *S.* key females of Ethiopian region p. 48, ZUMPT & TILL J. ent. Soc. S. Afr. 17 1954.

Steganacarus herculeanus sp. nov. Gipfel des Unterberges, Austria p. 515 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Stenotarsonemus gen. nov. [Tarsonemidae] defined p. 1229; type species *S. hyaleos* sp. nov. ♂ + ♀ off salt-marsh grass, San Mateo Co., California p. 1256 figs.; *S. fulgens* sp. nov. ♂ + ♀ off *Salix* sp., Beaver Lake, Washington p. 1281 figs.; *S. ananas* comb. nov. p. 1276 figs.; *S. bancrofti* comb. nov. p. 1249 figs.; *S. chionaspivorus* comb. nov. p. 1285 figs.; *S. laticeps* comb. nov. p. 1231 figs.; *S. latipes* comb. nov. p. 1238 figs.; *S. pallidus* comb. nov. p. 1267 figs.; *S.*

phyllophorus comb. nov. p. 1244 figs.; *S. spirifex* comb. nov. p. 1261 figs.; *S.* key to ♂♂ p. 1230, BEER Kans. Univ. Sci. Bull. 36 1954.

Sternostoma meddai sp. nov. *S. Vito* nel Sarrabus, Sardinia p. 187 fig., LOMBARDINI Redia 38 1953.

Stigmaeus anomalus sp. nov. Gesäuse, Austria p. 491 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953; *S. calbunae* sp. nov. ♀ Devon, England p. 802 figs., EVANS Proc. zool. Soc. Lond. 123 1954.

Stylohygrobatas longipalpis ♀ p. 81 fig., VIETS 764.

Suctobelba ornithorhyncha sp. nov. Glockengruppe, Austria p. 500 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Synchthonius boschmai new to Britain p. 806, EVANS 247.

Szalayella gen. nov. [Axonopsidae] defined p. 563; type species *S. incisica* sp. nov. ♂ Puracé, Colombia p. 563 figs., LUNDBLAD Ark. zool. N.S. 5 1954.

Tamboella subgen. nov. see *Koenikea*, LUNDBLAD 472.

Tarsonemus dispar sp. nov. ♂ + ♀ off *Popilius disjunctus*, Baldwin, Kansas p. 1148 figs.; *T. pritchardi* sp. nov. ♂ + ♀ off *Spathiphyllum*, San Leandro, California p. 1202 figs.; *T. sulcatus* sp. nov. ♂ + ♀ off hibiscus, Washington, D.C. p. 1155 figs.; *T. cryptocephalus* comb. nov. p. 1162 figs.; *T. confusus* p. 1173 figs.; *T. laminifer* p. 1169 figs.; *T. occidentalis* p. 1117 figs.; *T. randsi* p. 1133 figs.; *T. scaurus* p. 1213 figs.; *T. setifer* p. 1125 figs.; *T. simplex* p. 1188 figs.; *T. smithi* p. 1141 figs.; *T. texanus* p. 1196 figs.; *T. unguis* p. 1212 figs.; *T. waitei* p. 1181 figs.; *T.* key to ♂♂ p. 1116, BEER Kansas Univ. Sci. Bull. 36 1954.

Tectocephus concurvatus sp. nov. Germany p. 296 figs.; *T. coniunctus* sp. nov. Germany p. 298 fig.; *T. cuspidentatus* sp. nov. Germany p. 293 figs.; *T. trans-lamellatus* sp. nov. Germany p. 295 figs.; *T. tenuis* sp. nov. Germany p. 290 figs.; *T. alatus* p. 302 figs.; *T. minor* p. 300 fig.; *T. sarekensis* p. 281 figs.; *T. velatus* p. 286 figs.; revision of genus p. 280, KNÜLLE Zool. Anz. 152 1954.

Tectoribates borussicus (Sellnick 1909) syn. of *T. tecta* (Michael 1883) p. 809, EVANS 247.

Tenuipalpus orchidarum, systematics, morphology and biology p. 304 figs., DOSSE 224.

Tetra cercocarpi sp. nov. off *Cercocarpus ledifolius* (Rosaceae), Shasta Co., California p. 68 figs., KEIFER Bull. Dept. Agric. Calif. 41 1952.

Tetrahygrobatella subgen. nov. *Hygrobatella* p. 512, LUNDBLAD 472.

Tetranychus cocosinus sp. nov. ♂ off *Celtis* sp. Port Allen: ♀ off *Rubus* sp. Baton Rouge, Louisiana p. 182 figs.; *T. magnoliae* sp. nov. ♂ + ♀ off *Magnolia grandiflora*, Baton Rouge; Louisiana also off *Liriodendron tulipifera* p. 184 figs.; *T. merganser* sp. nov. ♂ + ♀ off *Ligustrum vulgare*, Baton Rouge, Louisiana p. 181 figs., BONDREAU Pan Pacific Ent. 30 1954; *T. atlanticus* p. 227 figs.; *T. bimaculatus* p. 221 figs.; *T. canadensis* p. 221 figs.; *T. desertorum* p. 229 figs.; *T. marianae* p. 229 fig.; *T. pacificus* p. 215 figs.; *T. schoenei* p. 217 figs.; *T. tumidus* p. 232 figs.; *T. key* to species from cotton in North and Central America p. 214, BAKER & PRITCHARD 56; *T. mcdanieli* and *T. pacificus* identity discussed p. 460, NEWCOMER 538; *T. telarius* p. 238 figs., VERGANI 762; *T. telarius* p. 1325 figs., VRYDAGH & COOREMAN 775.

Thinoseius fucicola redescribed p. 615 figs.; syn. *Thinoseius berlesei* Halbt. ♂ 1920 and *Lasioseius fucicola* Halbt. ♀ 1920 p. 616; *T. spinosus* redescribed p. 619 figs.; Systematics of genus discussed p. 621, EVANS 245.

Thyas ezoensis sp. nov. ♀ Kamikoshi, Hokkaido, Japan p. 34 fig.; *T. barbigera* ♀ + ♂ p. 29 figs., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954.

Tiphys (s. str.) *daisetsuensis* sp. nov. ♂ + ♀ + N. + L. Sugatami-ike, Mt. Daisetsu, Hokkaido, Japan p. 104 figs., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954.

Torrenticola bicincta sp. nov. ♀ R. Orava, Nizna: ♂ Racova-Bach, Oravský Podzámok, Slovakia p. 290 figs., LÁSKA Acta Acad. sci. nat. Morav. 25 1953; *T. brevirostris* var. *lata* var. nov. ♀ Vir, Mähren, Austria p. 292 figs.; *T. brevi-*

rostris p. 293 figs., LÁSKA Mém. Soc. zool. tchéosl. 17 1953; *T.* (s. str.) *cavifrons* sp. nov. ♂ + ♀ Corsica p. 113 figs.; *T.* (*Micropalpis*) *minutirostris* sp. nov. ♂ Taravo, Corsica p. 130 figs.; *T.* (*Megapalpis*) *remyi* sp. nov. ♀ Golo, Ponte-Leccia: Tavignano, Corsica p. 120 figs.; *T.* (s. str.) *anomala* ♂ + ♀ p. 102 figs.; *T.* (s. str.) *barsica* ♂ + ♀ p. 107 figs.; *T.* (s. str.) *brevirostris* ♂ + ♀ p. 117 figs.; *T.* (s. str.) *lativalvata* ♂ + ♀ p. 110 figs.; *T.* (s. str.) *longirostris* ♀ p. 105 figs.; *T.* (*Micropalpis*) *stadleri* ♂ + ♀ p. 123 figs.; *T.* (*Rusetria*) *ungeri* ♂ + ♀ p. 131 figs., ANGELIER Vie et Milieu 5 1954; *T. piriformis* sp. nov. ♀ Orava-Flusses, Nizná, Slovakia p. 285 figs.; *T. dudichi* var. *oraviensis* var. nov. ♂ R. Orava, Eisenbahnstation Kralovany, Slovakia p. 287 figs., LÁSKA Acta Acad. sci. nat. Morav. 25 1953; *T.* (s. str.) *brevis* subsp. *clavipes* subsp. nov. ♂ El Tambo, Colombia p. 466 figs.; *T.* (s. str.) *bicolor* ♀ + ♂ redescribed p. 462 figs.; *T.* (s. str.) *brevis* ♂ redescribed p. 465 figs.; *T.* (s. str.) *columbiana* ♂ + ♀ redescribed p. 460 figs.; *T.* (s. str.) *conirostris* ♀ + ♂ redescribed p. 463 figs.; *T.* (*Rusetriella*) *hesperia* ♂ + ♀ redescribed p. 468 figs., LUNDBLAD Ark. Zool. N.S. 5 1954; *T.* (*R.*) *amplexa*, variability p. 247, BESSELING 85; *T. andrei* p. 283 fig., LÁSKA 434; *T. stadleri* ♀ + ♂ p. 513 figs., LÁSKA 436.

Trachytes montanus sp. nov. ♀ Glocknergruppe, SW-Hang, Austria p. 476 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953; *T. minima* new to Britain p. 799, EVANS 247.

Trichoribates berlesei nom. nov. pro *Oribates setosus* Berlese 1887 non C. L. Koch 1839 p. 422, JACOT Trans. Amer. micr. Soc. 48 1929 [Omitted from Z.R. 1930 No. 152]; *T. notatus* nymph p. 18 fig., HAMMER 315.

Triophyteus cellicus sp. nov. ♀ The Burren, Co. Clare, Eire p. 801 figs., EVANS Proc. zool. Soc. Lond. 123 1954.

Trisetica Traub & Evans 1950 synonym of *Tecomatlana* Hoffmann 1947, p. 121, WOMERSLEY 809.

Trombella adaladeae redescribed p. 127 figs.; *T. warregensis* redescribed p. 125 figs., WOMERSLEY 807.

Trombicula antechinus sp. nov. larva off marsupial mouse, *Antechinus flavipes*, Mt. Glorious, Queensland p. 69 figs.;

T. derricki sp. nov. larva Mt. Jukes, Queensland p. 67 figs.; *T. mackayensis* sp. nov. larva Mt. Jukes, Queensland p. 72 figs.; *T. thylogale* sp. nov. larva off Wallaby, *Thylogale wilcoxi*, Mt. Tamborine, Queensland p. 71 figs., WOMERSLEY Trans. roy. Soc. S. Aust. 77 1954; *T. arenicola* sp. nov. larva off kangaroo rat, *Dipodomys ordi*, Liberal, Seward Co., Kansas: also off *Perognathus hispidus*: off *Muscivora forficata*, Kansas: off *Cittellus richardsoni*, off *Mus musculus*, Alberta: off *Dipodomys microps*, off *Perognathus parvus*, Utah: off *Perognathus flavus*, New Mexico: off *Neotoma albigula*, Colorado p. 930 figs.; *T. crossleyi* sp. nov. larva off woodpecker, *Melanerpes erythrocephalus*, Kansas: also *Peromyscus leucopus*, off *P. maniculatus*, Oklahoma p. 920 figs.; *T. fitchi* sp. nov. larva off bat, *Myotis velifer*, Kansas: also off *Sciurus niger*, off *Sciurus carolinensis*, off *Elaphe obsoleta*, off *Neotoma micropus*, off *Glaucomys volans*, Illinois p. 926 figs.; *T. kardoni* sp. nov. larva off squirrel, *Sciurus niger*: also off *Elaphe obsoleta*, Kansas: off *Eutamias umbrinus*, Utah p. 929 figs.; *T. (Euschöngastoides subgen. nov.) hoplasi* sp. nov. larva off prairie dog, *Cynomys ludovicianus*: off *Neotoma lepida*: off *Neotoma micropus*: off *Peromyscus leucopus*, Kansas: off *Neotoma mexicana*, New Mexico: off *Cittellus tridecemlineatus*, Texas p. 924 figs.; *T. (Leptotrombidium) twentei* sp. nov. larva off bat, *Antrozous bunkerii*, Kansas p. 922 figs., LOOMIS Kans. Univ. Sci. Bull. 36 1954; *T. (Trombicula) azteca* sp. nov. larva off *Sorex saussurei*, "La Venta," Distrito Federal, Mexico also off *Peromyscus hylocetes* p. 89 figs.; *T. (T.) boneti* sp. nov. larva off *Mormops megalophylla* (?), Cueva de Quintero, Tamaulipas, Mexico p. 87 figs., HOFFMANN Ciencia 12 1952; *T. brevitarsa* sp. nov. larva off *Rhinolophus clivosus acrotis*, Ta'izz, Yemen p. 301 fig.; *T. filamentosa* sp. nov. larva off *Rhinolophus clivosus acrotis*, Ta'izz, Yemen p. 299 fig.; *T. hoogstraali* sp. nov. larva off *Rattus r. rattus* Ta'izz, Yemen p. 297 fig.; *T. knighti* sp. nov. larva off *Rhinolophus clivosus acrotis*, Ta'izz, Yemen p. 298 fig., RADFORD Fieldiana, Zool. 34 1954; *T. (Miyatrombicula) esoensis* sp. nov. larva off *Clethrionomys rufocanus bedfordiae*, Rubeshibe, Hokkaido, Japan p. 333 figs.; nymph described p. 335 figs.; *T. (M.)* revision of subgen.

with key to species p. 336, *T. (Lepto.) kawamurai* p. 343 figs., SASA & OGATA Jap. J. exp. Med. 23 1953; *T. (Neotrombicula) finleyi* sp. nov. larva off *Neotoma cinerea orolestes*, Dolores Co., Colorado p. 88 figs.; *T. (N.) loomisi* sp. nov. larva off *Reithrodontomys megalotis*, off *Peromyscus maniculatus*, and off *Mus musculus*, Yuma Co., Colorado also from Dundy Co., Nebraska p. 85 figs.; *T. (N.) autumnalis* new to United States, redescribed p. 74 figs.; *T. (N.) browni* p. 83 figs.; *T. (N.) harperi* p. 80; *T. (N.) lipovskyi* p. 91 figs.; *T. (N.) microti* p. 78; *T. (N.) richmondi* p. 90; *T. (N.) subsignata* p. 77; *T. (N.) sylvilagi* p. 103 figs.; *T. (N.) whartoni* p. 98 figs.; key to species of *T. (N.)* of United States p. 73; list of hosts in Central United States p. 111, KARDOS Kans. Univ. Sci. Bull. 36 1954; *T. flagellifera* sp. nov. larva off shrew, *Crociodura* sp., Tenompok, Mt. Kinabalu, North Borneo: also off *Nannosciurus whiteheadi* (pigmy tuft-eared squirrel) and *Hylomys suillus* (short-tailed shrew) p. 46 figs.; *T. tuhana* sp. nov. larva off *Nannosciurus whiteheadi* (pigmy tuft-eared squirrel), Bundu Tuhan, Mt. Kinabalu, North Borneo p. 46 figs.; *T. vorca* sp. nov. larva off bird, Kenompok, Mt. Kinabalu, North Borneo p. 47 figs.; *T. (Leptotrombidium) baluensis* sp. nov. larva off *Crociodura* sp. (shrew), Tenompok, Mt. Kinabalu, North Borneo: also off *Hylomys suillus* (short-tailed shrew), off *Dremomys everetti* (ground squirrel) and *Rattus* sp., p. 48 figs.; *T. (L.) micula* sp. nov. larva off *Nannosciurus melanotis* (pigmy squirrel), Stapok Forest Reserve, Kuching, Sarawak: also off *Callosciurus notatus*, p. 51 figs.; *T. (L.) pilalta* sp. nov. larva off *Rattus r. baluensis*, Kamborangah, Mt. Kinabalu, North Borneo: also off *Tupaia montana* (tree shrew) and *Dendrogale* sp. (tree shrew), p. 50 figs.; *T. (L.) pipellae* sp. nov. larva off *Prionodon linsong gracilis* (civet), Tenompok, Mt. Kinabalu, North Borneo: also off *Callosciurus notatus*, off *Helictis everetti* (ferret-badger), off *Rattus alticola*, off *Rattus mülleri* and *Echinosorex gymnurus* (moon-rat) p. 49 figs.; *T. (L.) tarsala* sp. nov. larva off *Rattus mülleri*, Stapod Road, Kuching, Sarawak p. 51 figs.; *T. (L.) akamushi* p. 74 figs.; *T. (L.) deliensis* p. 74 figs.; *T. (L.) fulleri* p. 60 fig.; *T. (L.) intermedia* p. 60 fig.; *T. (L.) scutellaris* p. 60 fig., TRAUB & AUDY

- Stud. Inst. med. Res. F.M.S. No. 26 1954; *T. imperfecta* sp. nov. larva off Baird pocket mouse, *Perogethous flavus*, Santa Fe, New Mexico, also off *Perogethous californicus* and off *Peromyscus maniculatus* p. 186 fig., BRENNAN & JONES Wasmann J. Biol. 12 1954; *T. (Leptotrombidium) karamurai* sp. nov. larva off *Rattus rattus* spp., Oro-ike, Miyake-jima, Japan p. 2 figs., FUKUZUMI & OBATA Kitasato Arch. exp. Med. 26 1953; *T. merrihewi* sp. nov. larva off Mexican free-tailed bats, *Tadarida mexicana*, Merrihew Cave, Aetna, Kansas p. 51 figs.; *T. ornata* sp. nov. larva off gray wood rats, *Neotoma micropus*, Aetna, Kansas p. 47 figs., LOOMIS & LIPOVSKY J. Kansas ent. Soc. 27 1954; *T. mounti* sp. nov. larva off bat, *Nycteris capensis damarensis*, Asmara, Eritrea p. 315 figs., RADFORD Fieldiana, Zool. 35 1954; *T. nativitatis* sp. nov. larva off lizard, *Uta concinna*, Natividad Id., Bay of California, Mexico p. 148 figs.; *T. potosina* sp. nov. larva off *Neotoma micropus*, Region de Bocas, San Luis Potosi, Mexico p. 151 figs.; *T. cynos* p. 150 fig., HOFFMANN Ciencia 10 1950; *T. quasigiroudi* sp. nov. larva off *Dasymys bentleyae*, Musha, Astrida, Belgian Congo p. 196 figs., JADIN & VERCAMMEN-GRANDJEAN Ann. Mus. Congo belg. N.S. 4to Zool. 1 1954; *T. (Leptotrombidium) subintermedia* sp. nov. larva off *Apodemus agrarius*, Yonchon, Southern Korea p. 18 fig.; *T. myotis* p. 19 fig.; *T. (L.) orientalis* p. 16 fig.; *T. (L.) subakamushi* p. 20 fig., JAMESON & TOSHIOKA Pacif. Sci. 8 1954; *T. thomsoni* sp. nov. larva off bats, *Chalinolobus gouldi*, Ayer's Rock, Northern Territory of Australia p. 827 fig., WOMERSLEY Ann. Mag. nat. Hist. (12) 7 1954; *T. (L.) akamushi* adult and nymph p. 412 figs.; *T. (L.) pallida* adult and nymph p. 415 figs.; *T. (L.) intermedia* adult and nymph p. 416 fig.; *T. (L.) scutellaris* nymph p. 417 figs.; *T. (L.) teramurai* adult and nymph p. 417 figs.; *T. (L.) fuji* adult and nymph p. 418 figs.; *T. (L.) kitasatoi* adult and nymph p. 418 figs.; *T. (L.) tosa* adult and nymph p. 419 figs.; *T. (L.) tenjin* adult p. 419 fig.; *T. (L.) palpalis* nymph p. 420 figs.; *T. (L.) miyazakii* nymph p. 420 figs.; *T. (L.) miyajimai* nymph p. 421 figs.; *T. (E.) wichmanni* adult and nymph p. 421 figs.; *T. (N.) japonica* nymph p. 423 figs.; *T. (N.) pomeranzevi* nymph p. 424 figs.; *T. (M.) esoensis* nymph p. 425 figs., SASA 645; *T. (Trombiculindus) kansai* redescribed p. 274 fig.; *T. (Miyatrombicula) kochiensis* redescribed p. 276 fig.; *T. (Neotrombicula) japonica* redescribed p. 278 fig.; *T. (N.) microti* redescribed p. 282 fig.; *T. (N.) mitamurai* redescribed p. 280 fig.; *T. (N.) pomeranzevi* redescribed p. 282 fig.; *T. (N.) nagayoi* redescribed p. 280 fig.; *T. (N.) tamiyai* redescribed p. 281 fig.; *T. (Neotrombicula)* key to Japanese species p. 278; *T. (Leptotrombidium) toshiokai* sp. nov. larva off *Myotis macrodactylus*, Nikko, Tsuchigi Pref., Japan p. 302 fig.; *T. (L.) akamushi* redescribed p. 292 fig.; *T. (L.) fuji* redescribed p. 296 fig.; *T. (L.) himizu* redescribed p. 290 fig.; *T. (L.) intermedia* redescribed p. 308 fig.; *T. (L.) kitasatoi* redescribed p. 297 fig.; *T. (L.) kuroshio* redescribed p. 302 fig.; *T. (L.) miyairii* redescribed p. 298 fig.; *T. (L.) miyajimai* redescribed p. 292 fig.; *T. (L.) miyazakii* redescribed p. 306 fig.; *T. (L.) pallida* redescribed p. 294 fig.; *T. (L.) palpalis* redescribed p. 288 fig.; *T. (L.) scutellaris* redescribed p. 309 fig.; *T. (L.) tanaka-ryoi* redescribed p. 296 fig.; *T. (L.) tenjin* redescribed p. 300 fig.; *T. (L.) teramurai* redescribed p. 300 fig.; *T. (L.) tosa* redescribed p. 298 fig.; *T. (L.) yasukai* redescribed p. 290 fig.; *T. (Eutrombicula) wichmanni* redescribed p. 310 fig.; *T. koomori* sp. nov. larva off *Rhinolophus ferrumequinum*, Ohara, Kyoto Pref., Japan p. 316 fig.; *T. anous* redescribed p. 312 fig.; *T. hasegawai* redescribed p. 316 fig.; *T. shiraii* redescribed p. 315 fig., SASA & JAMESON Proc. Calif. Acad. Sci. (4) 28 5 1954; *T. deliensis* in Cochinchina p. 93, ANDRÉ 16; *T. (T.) wichmanni* in Indo-China, variation of dimensions p. 95, ANDRÉ 17; *T. zachvatkini* redescribed p. 347 figs., VISOTZKAYA & SHLUGER 771.
- Trombiculindus pruthi* sp. nov. larva off crab-eating mongoose, *Herpestes urva* and squirrel, *Dremomys macmillani*, Madbung Village and Dimapur-Imphal Road, Assam p. 332 fig.; *T.* key to species p. 333, SINHA Parasitology 44 1954.
- Trouessartia africana* sp. nov. ♂ + ♀ + N. off blue-billed fire finch, *Lagonosticta rubricata*, Sabi and Lundi Rivers, S. Rhodesia p. 195 figs.; *T. carpi* sp. nov. ♂ + ♀ + N. off scrub robin, *Erythror-*

pygia leucophrys, Sabi and Lundi Rivers, S. Rhodesia p. 197 figs.; *T. transvaalensis* sp. nov. ♂ + ♀ + N. ♂ off ant-eating chat, *Myrmecocichla formicivora*, Potchefstroom, Transvaal p. 198 figs.; *T. appendiculata*? ♂ + ♀ p. 199 figs.; *T. rosteri* ♂ + ♀ p. 194 figs.; Key to Ethiopian species p. 189, TILL Rev. Ecuat. Ent. Par. 2 1954.

Turkiella gen. nov. [Laelaptidae] defined p. 215; type species *Androlaelaps theseus* Zumpt p. 216; *T. zuluensis* from bush-baby, *Galago senegalensis braccatus*, Karamoja, Uganda p. 218 figs.; transferred to genus *Androlaelaps oudemansi* Radford and *Androlaelaps arvicanthi* Radford p. 221; key to ♀♀ of *T.* in Ethiopian region p. 223, ZUMPT & TILL An. Inst. Med. trop., Lisboa 10 1953.

Tydeus aberrans new to Britain p. 799; *T. caudatus* new to Britain p. 799, EVANS 247.

Typhlodromus africanus sp. nov. ♀ + ♂ off coffee leaves, Lyamungu, Tanganyika Territory p. 524 figs.; *T.* gen. reviewed p. 523, EVANS Proc. zool. Soc. Lond. 124 1954; *T. bellinus* sp. nov. ♀ off strawberry plants, Tasmania p. 177 fig.; *T. nesbitti* sp. nov. ♀ off tree lucerne, Goulburn, New South Wales p. 179 fig.; *T. victoriensis* sp. nov. ♀ citrus leaf, Merbein, Victoria p. 180 fig.; *T. cucumeris* new to Australia p. 175 fig.; *T. fallaxis* new to Australia p. 174 fig.; *T. longispinosus* new to Australia p. 177 fig.; *T. (Neoseiulus) bakeri* new to Australia p. 183 fig.; *T. (N.) reticulatus* new to Australia p. 183 fig.; *T.* key to species p. 172, WOMERSLEY Aust. J. Zool. 2 1954; *T. californicus* sp. nov. ♂ off lemon fruit, Whittier, California p. 89 figs.; *T. mungeri* sp. nov. ♀ off lemon fruit, Whittier, California p. 92 figs., MCGREGOR Bull. S. Calif. Acad. Sci. 53 1954.

Typhlothrombium aelleni sp. nov. Grotte de l'Echelette, Jura bernois, Switzerland p. 14 figs., COOREMAN Bull. Mus. Hist. nat. Belg. 30 34 1954.

Tyroglyphus vjatschensis sp. nov. in litt. in nest of *Lasius niger niger*, Russia p. 211; *T. vjatschslavi* sp. nov. in litt. in nest of *Formica rufa rufa*, Russia p. 211, SOROKIN Ent. Obozr. Moscow 33 1953; *T. concianus* sp. nov. ♂ Grotta Grande di Pignone, La Spezia, Italy p. 192 figs., LOMBARDINI Redia 38 1953.

Unionicola (Hexatax) niigata sp. nov. ♂ + ♀ Kakizaki-machi, Nakakubikigun, Niigata, Japan p. 152 fig.; *U. (H.) ovalis* sp. nov. ♀ Kakizaki-machi, Nakakubikigun, Niigata, Japan p. 154 fig., IMAMURA J. Hokkaido Gakugei Univ. Sect. B. Suppl. No. 1 1954; *U. (Pentatax) parvula* sp. nov. ♀ Béziers, France p. 156, LUNDBLAD Zool. Anz. 153 1954; *U. (Pentatax) perpussilla* sp. nov. ♂ Lago Pauxis, Amazons p. 130 fig.; *U. (P.)prehendens* sp. nov. ♀ Igarapé Laguinho; Lago Grande Curuay, Amazons p. 129 fig.; *U. (P.) pugionipalpis* sp. nov. ♀ Mission Rio Cururú, Lago do Jacaré, Amazons p. 131 fig.; *U. (P.) pusuligera praegracilis* subsp. nov. ♀ + ♂ Lago Grande Curuay; Santarem; Paraná Yayá: Lago Pauxis; Lago Salgado, Amazons p. 132 fig.; *U. (P.) tumidipalpis* p. 133 fig.; *U. (U.) siolii* sp. nov. ♀ Alemquer, Amazons p. 133 figs., VIETS Schweiz. Z. Hydrol. 16 1954; *U. (Pentatax) pusuligera* sp. nov. ♂ + ♀ Surinam, Dutch Guiana p. 86 figs.; *U. (P.) longidens conjuncta* subsp. nov. Pernambuco, Brazil p. 85 figs., VIETS Arch. Hygrobiol. 49 1954; *U. (P.) bonzi* p. 463 fig.; *U. (P.) intermedia* p. 464 fig.; *U. (P.) ypsilophora* p. 460 figs., VIETS & PLATE 767; *U. (s. str.) uchidai* larva p. 87 fig., IMAMURA 370.

Urocychellopsis gen. nov. [Uropodidae] defined p. 477; type species *U. similis* sp. nov. ♂ Glocknergruppe, Austria p. 478 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Uropoda bosii sp. nov. deutonym. locality not given p. 88; *U. ritzemanni* sp. nov. deutonym. locality not given p. 88, OUDEMANS Ent. Ber. 1 1903 [Omitted from Z.R. 1903].

Vasates dormitor sp. nov. ♀ ex.—*Populus tremuloides* (Salicaceae), El Dorado Co., California p. 126 figs., KEIFER Bull. Dept. Agric. Calif. 43 1954; *V. lupini* sp. nov. ♀ off *Lupinus alba*, Du Pont, Washington p. 426 figs., BATCHELOR & BREAKEY Ann. ent. Soc. Amer. 47 1954; *V. populivagrans* sp. nov. ♀ + ♂ off *Populus fremontii* (Salicaceae), Sacramento, California p. 68 figs.; *V. pritchardi* sp. nov. ♀ off *Ceanothus cuneatus* (Rhamnaceae), Contra Costa Co., California p. 68 figs., KEIFER Bull. Dept. Agric. Calif. 42 1953; *V. lycopersici*, injury and habits p. 1002 figs., ANDERSON 12.

Veigaia cervus p. 246 fig., HIRSCHMANN 335.

Villersiella gen. nov. [Stigmaeidae] defined p. 488; type species *V. quadriscutata* sp. nov. Pinzgau, Austria p. 488 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953.

Walchia manipurensis sp. nov. larva off *Bandicoota bengalensis bengalensis*, Kanglatongli, Assam p. 335 fig., SINHA Parasitology 44 1954.

Wandesia stygophila new to Corsica p. 513 figs., ANGELIER 26.

Whartonia whartoni sp. nov. larva off *Blattella germanica* *musculus*, Matamoros, Puebla, Mexico p. 33 figs., HOFFMANN Ciencia 11 1951.

Womersleyia redefined p. 114; *W. minuta* redescribed p. 114 figs., WOMERSLEY 808.

Xenotarsonemus gen. nov. [Tarsonemidae] defined p. 1314; type species *Tarsonemus viridis* Ewing 1939, p. 1314 figs., BEER Kansas Univ. Sci. Bull. 36 1954.

Zachvatkinella gen. nov. [Acaronychidae] defined p. 1042; type species *Z. belbiformes* sp. nov. ♂ + ♀ Sikhotealin, Russia p. 1042 figs., LANGE Zool. Zh. 33 1954.

Zercon anomalus sp. nov. Glocknergruppe, Austria p. 470 fig.; *Z. (Zerconella) subgen. nov. leitnerae* sp. nov. Lahngangkogel, N-Hang, Austria p. 473 fig.; *Z. alpinus* p. 469 fig.; *Z. inornatus* p. 472 fig.; *Z. montanus* p. 470 fig., WILLMANN S.B. öst. Akad. Wiss. Abt. 1 162 1953; *Z. blesti* sp. nov. ♀ Heyschott, Sussex p. 798 figs.; *Z. arcuatus* new to Britain p. 798; *Z. zelawaiensis* new to Britain p. 798; *Z. spatulatus* new to Britain p. 798, EVANS Proc. zool. Soc. Lond. 123 1954.

Zerconella subgen. nov. see *Zercon*, WILLMANN 800.

Zwickia gibsoni sp. nov. ♀ + ♂ in the pitchers of *Sarracenia purpurea*, Danford Lake, Quebec, Canada p. 193 figs.; *Z.* key to species p. 197, NESBITT Canad. Ent. 86 1954.

†ANTHRACOMARTI

[No record.]

†KUSTARACHNIDA

[No record.]

†HAPTOPODA

[No record.]

†TRIGONOTARBI

[No record.]

†PHALANGIOTARBI

[No record.]

†ARCHITARBI

[No record.]

PENTASTOMIDA

Armillifer monilliformis nymph from domestic cat p. 119 figs., YUTUC 820.

Gigliolella gen. nov. for *Armillifer brumpti* Giglioli 1922 p. 330 figs., CHABAUD & CHOQUET Riv. Parassit. 15 1954.

Railietiella amphiboturi sp. nov. ♂ + ♀ from bearded lizard, *Amphibolurus barbatus*, Australia p. 509 figs., MAHON Proc. zool. Soc. Lond. 124 1954.

TARDIGRADA

Faunal list.—Piemonte, Italy with additions, TAPPI 716.

Batillipes mirus new to Italy p. 116 PAPI 557.

Echiniscoides sigismundi, habitat p. 554, CRISP & HOBART 188.

Echiniscus (*E.*) *apuanus* sp. nov. Alps Apuane, Italy p. 64 fig., BERTOLANI P.V. Soc. tosc. Sci. nat. 54 1947; *E. (E.) oihonnae* new to Italy p. 110 fig.; *E. (E.) spitsbergensis* new to Italy p. 111 fig., TAPPI 716; *E.* key to species p. 186, RAMAZZOTTI 594.

Pseudechiniscus novaezeelandiae new to Italy p. 113 fig.; *P. conifer* new to Italy p. 114 fig., TAPPI 716; *P.* key to species p. 181, RAMAZZOTTI 594.

CHILOPODA

Faunal list.—Pomerania and Wolin Id., KACZMAREK 394; Newfoundland, PALMÉN 553.

DIGNATHODONIDAE key to genera east of Rocky Mountains p. 417, CRABILL 186.

Brachygeophilus parki sp. nov. ♂ + ♀ Desplaines, Cook Co., Illinois p. 1 fig., AUERBACH Nat. Hist. Misc. No. 136 1954; *B. sinionus* sp. nov. ♂ Isola di Zannone, Italy p. 117, MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Cormocephalus impressus peruanus subsp. nov. Cerro de Pasco, São Rafael, Peru p. 118 figs.; *C. impressus birabeni* subsp. nov. San Pedro, Prov. Salta, Argentina p. 141 figs., BÜCHERL Mem. Inst. Butantan 25 1953; *C. (C.) andinus* redescribed p. 317 figs., KRAUS 419.

Cryptops argentinus sp. nov. Manantiales, Corrientes: Puerto Constanza, Entre Rios, Argentina p. 146 fig.; *C. schubarti* sp. nov. Procopio, Porto Ferreira, Brazil p. 130 figs., BÜCHERL Mem. Inst. Butantan 25 1953; *C. parisi* new to Great Britain p. 479, BAGNALL 54.

Geophilus anglicanus sp. nov. ♀ Sewerby, E. Yorks and Boxhill, Surrey p. 476; *G. pusillimus* sp. nov. ♀ Dulwich, London p. 478; *G. fucorum* new to Great Britain p. 476, BAGNALL Ann. Mag. nat. Hist. (10) 15 1935; *G. terrae-notae* sp. nov. ♂ + ♀ Newfoundland p. 134 figs., PALMÉN Arch. Soc. zool. bot. fenn. Vanamo 8 1954.

Koepckeiella gen. nov. [Schendylidae: Schendylinae] defined p. 311; type species *K. titicacaensis* sp. nov. ♂ + ♀ Choquechaca, Caracara, Lake Titicaca, Peru p. 312 figs., KRAUS Senckenbergiana 34 1954.

Korynia auza sp. nov. ♂ Squaw Valley, California p. 122, CHAMBERLIN Ent. News 65 1954.

Lamyctes andinus sp. nov. ♀ Cerro Atoija, Chucuito, Lake Titicaca, Peru p. 322 fig.; *L. taulisensis* sp. nov. ♀ Hacienda Taulis, Bergurwald, Peru p. 322 fig.; *L. pacificus* p. 321 fig., KRAUS Senckenbergiana 34 1954.

Lithobius lindrothi sp. nov. ♂ + ♀ St. Barbe, Newfoundland p. 141 figs., PALMÉN Arch. Soc. zool. bot. fenn. Vanamo 8 1954; *L. doderoi* subsp. *aligheri* subsp. nov. ♀ Grotta Verde, Alghero, Sardegna, Italy p. 98 fig., MANFREDI Atti Soc. ital. Sci. nat. 92 1953; *L. pusillus* subsp. *latialis* subsp. nov. ♂ Grotta Bellegra, Lazio, Italy p. 84, MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Linotaenia nomenclature discussed p. 117, CHAMBERLIN 150.

Litoschendyla litoralis sp. nov. ♂ Atico, Geröllstrand des Meeres, Peru p. 312 figs., KRAUS Senckenbergiana 34 1954.

Nesidiphilus montecristi sp. nov. Monte Cristo, Metapan, El Salvador

p. 295 figs., KRAUS Senckenbergiana Biol. 35 1954.

Neoportia koepckei sp. nov. Hacienda Llaguén, Wald von Ijicuchco, Peru p. 320 figs.; *N. occidentalis* sp. nov. Hacienda Montesecco, Lichter Bergwald, Peru p. 320 figs.; *N. peruviana* sp. nov. Hacienda Llaguén, Wald von Rejo Caragaruay, Peru p. 319 figs., KRAUS Senckenbergiana 34 1954.

Pachymerium ferrugineum, life history and ecology p. 1, PALMÉN & RANTALA 554.

Polycricus toltecus p. 296 figs., KRAUS 421.

Ribautia (Schizoribautia) andecola sp. nov. Camjata, Lake Titicaca, Peru p. 316 figs.; *R. (S.) montana* sp. nov. ♂ + ♀ Jaén, Strasse Olmos, Peru p. 315 figs.; *R. (Ribautia) pacifica* sp. nov. ♀ Trockenfluss-Ufergebüsch, Peru p. 314 figs.; *R. (R.) silvana* sp. nov. ♂ Hacienda Montesecco, Lichter Bergwald, Peru p. 313 figs.; *R. (R.)* key to species p. 313; *R. (S.)* key to species p. 315, KRAUS Senckenbergiana 34 1954.

Rhysida celeris andina subsp. nov. Vale de Chandemayo, Peru p. 112 fig., BÜCHERL Mem. Inst. Butantan 25 1953.

Schendyla (E.) zonalis new to Great Britain p. 475, BAGNALL 54.

Scutigera lincei redescribed p. 305 figs., KRAUS 421.

Sotimpus multigranosus sp. nov. ♂ O-Kegel des Vulkans San Vicente, El Salvador p. 304 figs.; *S. salvadorensis* sp. nov. ♂ Finca La Yoya, Sonsonate, El Salvador p. 302 figs.; *S. zilchi* sp. nov. ♂ Monte Cristo, Metapan, El Salvador p. 300 figs., KRAUS Senckenbergiana Biol. 35 1954.

Tomotaenia (Korynia) urania sp. nov. ♀ Beaumont Boy Scout Reservation, St. Louis, Missouri p. 417 fig., CRABILL Canad. Ent. 86 1954; *T. nomenclature* discussed p. 118; *T. parviceps* p. 119 figs., CHAMBERLIN 150.

DIPLOPODA

Discussion on Diplopoda pénicillates of amber and recent, CONDÉ 171.

Faunal lists.—Holland with key to species and figures, JEEKEL 384; Cavernicolous species in Italy, MANFREDI 484; Michigan with key, JOHNSON

387; New records to Washington, U.S.A., CAUSEY 143.

EURYURIDAE key to subfamilies and genera p. 57; defined p. 49, HOFFMAN 341.

EURYURINAE subfam. nov. [EURYURIDAE] p. 57, HOFFMAN J. Wash. Acad. Sci. 44 1954.

Allopocockia rotundata sp. nov. ♂ + ♀ Monte Cristo, Metapan, El Salvador p. 336 figs., KRAUS Senckenbergiana Biol. 35 1954.

Alcodesmus aporus sp. nov. ♂ + ♀ Weges Olmos-Jaen, Lichter Bergwald, Peru p. 32 figs.; *A. olivaceus* sp. nov. ♂ + ♀ Hacienda Taulis, Berg-Urwald, Peru p. 30 figs.; *A. pseudolivaceus* sp. nov. ♂ Strasse Olmos-Jaen, Lichter Bergwald, Peru p. 31 figs.; *A.* key to Peruvian species p. 28, KRAUS Senckenbergiana Biol. 35 1954.

Amplius intermittens sp. nov. ♂ Pichualcalco, Chiapas, Mexico p. 64 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954; *A. serratus* sp. nov. ♂ + ♀ Monte Cristo, Metapan, El Salvador p. 311 figs., KRAUS Senckenbergiana Biol. 35 1954.

Aniulus impressus p. 250 figs.; *A. venustus* p. 250 figs., JOHNSON 387.

Ansiulus matumotoi p. 148 figs., TAKAKUWA 714.

Anthroherposoma franciscocoli sp. nov. ♂ + ♀ Grotta de Vallonasso, Calizzano, Italy p. 88 figs.; *A. hyalops* ♂ p. 88 figs., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Antrokoreana gamooi p. 162 fig.; *A. gracilipes* p. 161 figs., TAKAKUWA 714.

Apheloria coriacea p. 249 fig., JOHNSON 387.

Apomus castellanus sp. nov. ♂ + ♀ Vila Velha, Ponta Grossa, Brázil p. 122 figs.; *A.* sp. 1. ♀ Curitiba, Brazil p. 123 fig.; *A.* sp. 2. ♀ Volta Grande, Piranguara, Brazil p. 123 fig., SCHUBART Arq. Mus. Paranaense 10 1954; *A. (Parapomus* subgen. nov.) defined p. 317; type species *A. (P.) zilchi* sp. nov. ♂ + ♀ Vulkan Los Naranjos, El Salvador p. 317 figs., KRAUS Senckenbergiana Biol. 35 1954.

Aponedyapus maculatus p. 51 figs.; *A. montanus* p. 50 fig., TAKAKUWA 714.

Atractosoma ruffoi subsp. *fungicola* subsp. nov. ♂ Scanuppia, Trentino,

Italy p. 121 figs., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Azobolus ergus new to California p. 226, CAUSEY 144.

Bazillozonium nodulosum p. 215 figs., TAKAKUWA 714.

Boninozonium okabei p. 212 figs., TAKAKUWA 714.

Brachycybe producta new to California p. 221, CAUSEY 144.

Brachydesmus (Brachydesmus) yosemitensis sp. nov. ♂ Vernal Falls, Yosemite Nat. Park, California p. 224 fig., CAUSEY Pan Pacific Ent. 30 1954; *B. superus humilis* var. *spelaeus* var. nov. ♂ + ♀ Grotta di Santa Liberata, Monte Argentario, Toscana, Italy p. 99, MANFREDI Atti Soc. ital. Sci. nat. 92 1953; *B. superus scandinavus* p. 249 fig., JOHNSON 387.

Californibolus pontis new to California p. 224; *C. uncigerus* new to California p. 224, CAUSEY 144.

Callipus sorrentinus subsp. *sardus* subsp. nov. ♂ + ♀ Grotta "Su Colori," Laerru, Sardegna, Italy p. 98 figs., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Cambala washingtonensis sp. nov. ♀ Wilma, Garfield Co., Washington p. 85 fig., CAUSEY Ann. Ent. Soc. Amer. 47 1954.

Catharosoma castaneum sp. nov. ♂ Abra Porculla, Berg-Urwald, Peru p. 19 fig.; *C. nitidum* sp. nov. ♂ Hacienda Montesecco, Lichter Bergwald, Peru p. 20 figs.; *C. titicacaensis* sp. nov. ♂ + ♀ Cerro Atojja near Chucuito, Lake Titicaca, Peru p. 19 fig.; *C.* key to Peruvian species p. 18, KRAUS Senckenbergiana Biologica 35 1954; *C. curitibense* sp. nov. ♂ Volta Grande, Piranguara, Brazil p. 90 fig.; *C. digitale* sp. nov. ♂ + ♀ Vale de Ribeira, Bocaiuva do Sul, Brazil p. 87 figs.; *C. palmatum* sp. nov. ♂ Palmeira, Brazil p. 88 figs., SCHUBART Arq. Mus. Paranaense 10 1954.

Calzonium gen. nov. [Polyzoniidae] defined p. 232; type species *C. quicki* sp. nov. ♀ Chowchilla Mt., Mariposa Co., California p. 232, CHAMBERLIN Proc. biol. Soc. Wash. 67 1954.

Chamberlineptus gen. nov. [Spirostreptidae] defined p. 57; type species *C. morechalensis* sp. nov. ♂ + ♀ More-

chal, Delta-Amacuro, Venezuela p. 57 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954.

Chondrodesmus orientalis sp. nov. ♂ + ♀ Dorf Conchagua, El Salvador p. 309 figs.; *C. montanus* p. 309 figs., KRAUS Senckenbergiana Biol. 35 1954.

Cleidogona arkansana sp. nov. ♂ Princeton, Dallas Co., Arkansas p. 66 figs.; *C. sublettei* sp. nov. ♂ Grand Ecore, Natchitoches Parish, Louisiana p. 66 figs., CAUSEY Tulane Stud. Zool. 2 1954; *C. exaspera* p. 251 figs., JOHNSON 387.

Colactis loomisi sp. nov. ♂ Providencia, Durango, Mexico p. 1 figs., HOFFMAN Amer. Mus. Nov. No. 1673 1954.

Colobodesmus tiramus sp. nov. ♂ Sonsonate, Finca La Yoya, El Salvador p. 320 figs., KRAUS Senckenbergiana Biol. 35 1954.

Cryptogonodesmus peruvianus sp. nov. ♂ + ♀ Choquechacra, Caracara, Lake Titicaca, Peru p. 33 fig., KRAUS Senckenbergiana Biol. 35 1954.

Cylindrodesmus palmyrae sp. nov. Palmyra Island, Pacific Ocean p. 66 fig., CHAMBERLIN Ent. News 65 1954.

Cylindroiulus (Ypsiloniulus) nitidus new to Czechoslovakia p. 554 fig., LANG 432.

Delophon serrulatum sp. nov. ♂ Loxley, Baldwin Co., Mississippi p. 64 figs., CAUSEY Tulane Stud. Zool. 2 1954.

Diceratodesmus gen. nov. [Styloidesmidae: Pyrgodesminae] p. 862; type species *D. mimicus* sp. nov. ♂ Mont Nimba, French Guinea p. 863 figs., SCHUBART Bull. Inst. franç. Afr. noire 16A 1954.

Dimerogonus flagellatus p. 204 fig., TAKAKUWA 714.

Dinematocricus esakii p. 191 figs., TAKAKUWA 714.

Diploiulus hortensis p. 249 figs.; *D. londinensis caeruleocinctus* p. 249 figs., JOHNSON 387.

Dixidesmus gausodicrorrhachus sp. nov. ♂ Garnet Lake, Mackinaw Co., Michigan, p. 1 figs., JOHNSON Nat. Hist. Misc. No. 137 1954; *D. gausodicrorrhachus* p. 249 figs., JOHNSON 387.

Dolichoglyphius asper p. 206 figs., TAKAKUWA 714.

Elcarmenia gen. nov. [Rhachodesmidae] defined p. 328; type species *E.*

engelhardi sp. nov. ♂ O-Kegel des Vulkans San Vicente, El Salvador p. 329 figs., KRAUS Senckenbergiana Biol. 35 1954.

Epanerchodus acer sp. nov. Kawati, Nikko, Japan pp. 110 and 236 fig.; *E. bidens* sp. nov. Japan p. 109 fig.; *E. bifidus* sp. nov. Berg Aso, Japan also Huzenzan, Korea pp. 101 and 236 figs.; *E. dichotomus* sp. nov. Yuki, Korea pp. 101 and 232 fig.; *E. gracilis* sp. nov. Tesikaga, Hokkaido, Japan pp. 108 and 233 fig.; *E. gibbosus* sp. nov. Ikao, also Kuramayama, Kyoto: Uzuramura, Sakaigu, Hukui Pref., Japan pp. 98 and 233 fig.; *E. miyosii* sp. nov. Saragamine, Ehime Pref., Japan pp. 102 and 234 fig.; *E. nitidus* sp. nov. Sendai, Japan pp. 99 and 234 fig.; *E. obliquitruncatus* sp. nov. Bessho: Kuzu: Akakura, Huzi-Lavatunnel; Ikao, Japan pp. 98 and 232 fig.; *E. obtusus* sp. nov. Nikko, Japan pp. 103 and 233 fig.; *E. satoi* sp. nov. Ushidamura, Hiroshima, Japan pp. 97 and 235 figs.; *E. serratus* sp. nov. Heizan, Kyôto, Japan pp. 96 and 237 fig.; *E. simplex* sp. nov. Mitake, Tokyo pp. 112 and 234 figs.; *E. tenuis* sp. nov. Misasa, Tottori, Japan pp. 95 and 235 fig.; *E. fontium* p. 104 fig.; *E. furculiger* p. 112 fig.; *E. isikawai* p. 107 figs.; *E. japonicus* p. 95 fig.; *E. jägerskioldi jägerskioldi* p. 111 fig.; *E. koreanus* p. 100 fig.; *E. lobata* p. 108 figs.; *E. mammilatus* p. 99 fig.; *E. orientalis orientalis* p. 105 fig.; *E. orientalis takakuwai* p. 106 fig.; *E. tambaru* p. 106 fig.; *E. tremorum* p. 204 fig.; *E. (R.) subterraneus* p. 94 fig., TAKAKUWA Diplop. of Japan 1954; *E. aculeatus* sp. nov. ♂ Kitayama-Kyo, Japan p. 288 fig.; *E. sulcatus* sp. nov. ♂ Ja-Ana, Ishimaki-Mura, Aichi-Ken, Japan p. 289 fig., MIYOSI Zool. Mag. Tokyo 63 1954.

Epinannolene cylindricaulis sp. nov. ♂ Hacienda Taulis, Quebrada Pajonal, Berg-Urwald, Peru p. 50 figs., KRAUS Senckenbergiana Biol. 35 1954.

Epistreptus (Microtrullius) vagans re-described p. 340 figs., KRAUS 421.

Eucybe auctus sp. nov. ♂ + ♀ Chowchilla Mt., Mariposa Co., California p. 233, CHAMBERLIN Proc. biol. Soc. Wash. 67 1954; *E. clarus* new to California p. 221, CAUSEY 144.

†*Euphoberia llarenai* sp. nov., carboniferous, Stéphanien de Llombera,

León, Spain p. 457 figs., MELÉNDEZ C.R. 3e Congr. Stratigr. Géol. Carbonifère 2 1952.

Eurhinocricus angustiramus sp. nov. ♂ + ♀ Hacienda Taulis, Berg-Urwald, Peru p. 46 figs.; *E. peruvianus* sp. nov. ♂ Strasse Olmos-Jaen, Lichter Bergwald, Peru p. 48 figs., KRAUS Senckenbergiana Biol. 35 1954.

Euthydesmus revised p. 219; *E. acicarina* p. 219 figs., HOFFMAN 347.

Ezaria montana p. 87 fig., TAKAKUWA 714.

Ezodesmus lunatus p. 86 figs., TAKAKUWA 714.

Fontaria (*Cyphonaria*) *scabra* p. 73 fig., TAKAKUWA 714.

Fusiulus acutus p. 169 fig.; *F. bilobus* p. 173 fig.; *F. capillatus* p. 175 fig.; *F. cornutus* p. 177 fig.; *F. hirosaminus* p. 179 fig.; *F. koreanus koreanus* p. 178 figs.; *F. koreanus boninensis* p. 179 fig.; *F. koreanus tuberculatus* p. 179 fig.; *F. longus* p. 171 fig.; *F. onychophora* p. 169 fig.; *F. pinetorum* p. 174 fig.; *F. simodanus* p. 172 fig.; *F. simplex* p. 171 figs.; *F. quadratus* p. 176 figs.; *F. trigonalis* p. 170 fig.; *F. yamashinai* p. 173 figs.; *F. yosidanus* p. 180 fig., TAKAKUWA 714.

Gervaisia ligurina sp. nov. ♀ Arma Pollera, Liguria, Italy p. 86 fig., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Habrodesmus llaguénicus sp. nov. ♂ + ♀ Hacienda Llaguén, Wald von Ijicuch, Peru p. 18 figs., KRAUS Senckenbergiana Biologica 35 1954; *H. uncinatus* sp. nov. ♂ Finca San Jorge, Santa Ana, El Salvador p. 307 figs., KRAUS Senckenbergiana Biol. 35 1954.

Hakiulus diversifrons p. 250 figs., JOHNSON 387.

Haplogonosoma silvestre p. 28 fig., TAKAKUWA 714.

Haplothysanus (*Haplothysanus*) *tuzetae* sp. nov. ♂ Daloa, Ivory Coast p. 506 figs., SCHUBART Bull. Inst. franç. Afr. noire 16A 1954.

Harpaphe haydeniana new to Oregon p. 221; *H. pottera* new to California p. 222; *H. tersa* new to California p. 222 fig., CAUSEY 144.

Helicorthomorpha holstii trilobata p. 30 figs., TAKAKUWA 714.

Hemigonodrepanum gen. nov. [Stron-gylosomidae] defined p. 83; type species *H. iguassuense* sp. nov. ♂ + ♀ Iguassu, Brazil p. 84 fig., SCHUBART Arq. Mus. Paranaense 10 1954.

Hirsutogona gen. nov. [Cleidogonidae] defined p. 329; type species *H. minutissima* sp. nov. ♂ Laguna de Las Ranas, El Salvador p. 332 figs.; *H. mirabilis* sp. nov. ♂ + ♀ Monte Cristo, Metapan, El Salvador p. 329 figs., KRAUS Senckenbergiana Biol. 35 1954.

Hylecglomeris japonica p. 22 fig., TAKAKUWA 714.

Hypozoneum arnaldi sp. nov. ♀ Felton, Santa Cruz Co., California p. 233, CHAMBERLIN Proc. biol. Soc. Wash. 67 1954.

Ikaovulus leucosoma p. 153 figs., TAKAKUWA 714.

Inconus revised p. 216; *I. fronterus* p. 216 fig., HOFFMAN 347.

Iphyrina revised p. 219; *I. claralata* p. 219 fig., HOFFMAN 347.

Ischnocybe plicata new to Washington p. 86 figs., CAUSEY 143; *I. plicata* new to California p. 221, CAUSEY 144.

Janetschekella gen. nov. [Craspedosomidae: Atractosominae] defined p. 352; type species *J. nivalis* sp. nov. ♂ + ♀ Oisans Group, Dauphiné, France p. 353 figs., SCHUBART Öst. zool. Z. 5 1954.

Japanioivulus lobatus p. 181 figs., TAKAKUWA 714.

Japanosoma scabrum p. 122 figs., TAKAKUWA 714.

Japonaria acutidens p. 82 figs.; *J. attemsi* p. 77 fig.; *J. circula* p. 76 fig.; *J. erythrosoma* p. 81 figs.; *J. falcifera* p. 79 fig.; *J. laminata* p. 78 figs.; *J. laminata armigera* p. 79 figs.; *J. marmorata* p. 83 fig.; *J. spiralligera* p. 81 figs.; *J. terminalis* p. 80 fig., TAKAKUWA 714.

Karterciivulus niger p. 158 figs., TAKAKUWA 714.

Katantodesmus obumbratus sp. nov. ♀ Val do Rio Ivai, Reserva, Brazil p. 127 fig.; *K. occidentalis* sp. nov. ♂ Foz de Iguassu, Brazil p. 126 fig.; *K. auriculatus* p. 127 fig., SCHUBART Arq. Mus. Paranaense 10 1954.

Klansolus mononus sp. nov. Leevin-ning, Mono Co., California p. 231; *K.*

obscurans sp. nov. Big Bar Mt., Butte Co., California p. 231, CHAMBERLIN Proc. biol. Soc. Wash. 67 1954.

Kopidoiulus caecus p. 155 fig.; *K. ocellatus* p. 156 fig., TAKAKUWA 714.

Koreoaria amoena p. 71 figs.; *K. pallida* p. 71 fig., TAKAKUWA 714.

Kronopolites formosanus p. 31 fig.; *K. kanoi* p. 32 figs., TAKAKUWA 714.

Kylindogaster nodulosa p. 118 fig., TAKAKUWA 714.

Lavabates takakuwai p. 163 fig., TAKAKUWA 714.

Leptodesmus (*Pseudoleptodesmus*) *andinus* sp. nov. ♂ Abra Porculla, Berg-Urwald; ♀ Strasse Olmos-Jaen, Lichter Bergwald, Peru p. 26 figs.; *L. (P. ?) bivittatus* sp. nov. ♂ + ♀ Hacienda Llaguén, Rejo Cargarnay, Peru p. 26 figs.; *L. (Perudesmus) nodosus* sp. nov. ♂ + ♀ Weg Olmos-Jaen, Lichter Bergwald, Peru p. 27 figs.; *L. (Desmoleptus) ornatus* sp. nov. ♂ + ♀ Abra Porculla, Berg-Urwald, Peru p. 24 figs.; *L. (D.) similis* sp. nov. ♂ + ♀ Strasse Olmos-Jaen, Lichter Bergwald, Peru p. 25 figs.; *L. (Leptodesmus) taulisensis* sp. nov. ♂ Hacienda Taulis, Berg-Urwald, Peru p. 22 figs.; *L.* key to Peruvian species p. 21, KRAUS Senckenbergiana Biologica 35 1954; *L. camellatus* sp. nov. ♂ + ♀ Taio, Rio do Sul, Brazil p. 102 figs.; *L. paranaensis* sp. nov. ♂ + ♀ Caviuna, Rolandia Brazil p. 100 fig.; *L. paulistoides* sp. nov. ♂ Alto da Serra, Piraquara, Brazil p. 105 figs.; *L. paulistus meridionalis* subsp. nov. ♂ + ♀ Guaratuba, Brazil p. 104; *L. polydesmoides* sp. nov. ♀ Volta Grande, Piraquara, Brazil p. 112 fig.; *L. pubescens* sp. nov. ♂ Marumbi, Morretes, ♀ Campininha, Piraquara, Brazil and other localities in Brazil p. 109 figs.; *L. decipiens* p. 108 fig.; *L. eimeri* p. 99 fig., SCHUBART Arq. Mus. Paranaense 10 1954.

Leptoiulus mariae sp. nov. Nedere Tatra, Czechoslovakia p. 177 figs., GULIČKA Biol. Sb. Bratislava 7 1952; *L. (L.) alemannicus alemannicus* new to Czechoslovakia p. 555 fig., LANG 432.

Leucodesminus granulatus p. 116 figs., TAKAKUWA 714.

Levizonus circularis p. 74 fig., TAKAKUWA 714.

Macrochaeteuma sauteri p. 130 fig., TAKAKUWA 714.

Manfredia concii sp. nov. ♂ + ♀ Grotta delle Tassare, Urbino, Marche, Italy p. 91 figs., MANIFREDI Atti Soc. ital. Sci. nat. 92 1953.

Mongoliulus coreanus p. 152 fig., TAKAKUWA 714.

Monographis kraepelini p. 18 fig., TAKAKUWA 714.

Nearctodesmus cochlearius sp. nov. ♂ + ♀ Seattle, King Co., Washington p. 82 figs.; *N. olympus* sp. nov. ♂ + ♀ Olympic Hot Springs, Challam Co., Washington p. 84 figs., CAUSEY Ann. Ent. Soc. Amer. 47 1954; *N. olympus* new to Oregon p. 223, CAUSEY 144.

Nedyopus boninensis p. 46 fig.; *N. cingulatus* p. 49 fig.; *N. patrioticus koreanus* p. 48 fig.; *N. patrioticus nipponicus* p. 48 fig.; *N. tambanus* p. 45 fig.; *N. tambanus mangaesinus* p. 46 figs., TAKAKUWA 714.

Neocamptomorpha gen. nov. [*Leptodesmidae*] defined p. 96; *N. araucariae* sp. nov. ♂ + ♀ Morretes, Brazil p. 97 fig.; *N. araucariae* var. *aspera* var. nov. ♂ + ♀ São José dos Pinhais, Piraquara, Brazil p. 99 fig., SCHUBART Arq. Mus. Paranaense 10 1954.

Neoleptodesmus geniculatus sp. nov. ♂ + ♀ Monte Cristo, Metapan, El Salvador p. 325 figs.; *N. salvadorensis* sp. nov. ♂ + ♀ San Salvador p. 322 fig.; *N. sinuatus* sp. nov. ♂ + ♀ Laguna de Las Ninfas, El Salvador p. 326 figs.; *N. vulcani* sp. nov. ♂ + ♀ Vulkans Santa Ana, El Salvador p. 324 fig.; *N.* key to species p. 321, KRAUS Senckenbergiana Biol. 35 1954.

Okeanobates serratus p. 165 fig., TAKAKUWA 714.

Olmodesmus gen. nov. [Vanhoeffeniidae] defined p. 34; type species *O. laticeps* sp. nov. ♂ Strasse Olmos-Jaen, Lichter Bergwald, Peru p. 36 figs.; *O. longipes* sp. nov. ♂ + ♀ Hacienda Llaguén, Wald von Ijicuchio, Peru p. 39 figs.; *O. minimus* sp. nov. ♂ Strasse Olmos-Jaen, Lichter Bergwald, Peru p. 37 figs.; *O. taulisensis* sp. nov. ♂ Hacienda Taulis, Berg-Urwald, Peru p. 38 figs.; *O.* key to Peruvian species p. 36, KRAUS Senckenbergiana Biol. 35 1954.

Oncodesmoides gen. nov. [Cryptodesmidae: Pyrgodesminae] defined p. 41; type species *O. rectus* sp. nov. ♂

Weg Olmos-Jaen: ♀ Strasse Olmos-Jaen; Lichter Bergwald, Peru p. 42 figs.; *O. uncinatus* sp. nov. ♂ Hacienda Monteseo, Lichter Bergwald, Peru p. 44 fig., KRAUS Senckenbergiana Biol. 35 1954.

Onomatoplanus nodulosus p. 114 figs., TAKAKUWA 714.

Ophiyrulus pilosus p. 250 figs., JOHNSON 387.

Opiona hatchi sp. nov. ♂ Carkeek Park, Seattle, Washington: ♀ University of Washington Campus p. 81 figs., CAUSEY Ann. Ent. Soc. Amer. 47 1954.

Oriulus medianus new to Wyoming and Idaho p. 226, CAUSEY 144.

Oroposoma emiliae sp. nov. ♂ Buco Piccolo della Busa, Valsesia, Piemonte, Italy p. 93 figs., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Orsiboe ichigomensis p. 210 fig., TAKAKUWA 714.

Orthomorpha (*O.*) *coactata* p. 35 figs.; *O.* (*O.*) *mikronesiensis* p. 37 fig.; *O.* (*O.*) *sekiyuchii* p. 36 fig.; *O.* (*K.*) *avia* p. 38 fig.; *O.* (*K.*) *circofera affinis* p. 40 figs.; *O.* (*K.*) *cristata* p. 41 fig.; *O.* (*K.*) *gracilis* p. 37 figs.; *O.* (*K.*) *nordenskiöldi* p. 42 fig.; *O.* (*K.*) *obtusius* p. 43 fig.; *O.* (*K.*) *pekuensis* p. 39 fig.; *O.* (*K.*) *riukiaria* p. 39 fig., TAKAKUWA 714; *O. gracilis* new to Italy p. 140, MANFREDI 486.

Orthoporus unicus sp. nov. ♂ + ♀ Rancho Nuevo, Chiapas, Mexico p. 55 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954; *O. ornatus* ♀ described p. 68 fig., CAUSEY 146.

Oxobolus distinctus sp. nov. ♂ Monte Cristo, Metapan, El Salvador p. 333 figs., KRAUS Senckenbergiana Biol. 35 1954; *O. magnificus* sp. nov. ♂ Rancho Monserrate, Chiapas, Mexico p. 61 figs.; *O. tardus* sp. nov. ♂ Simojovel, Chiapas, Mexico p. 61 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954.

Pachydesmus bazanensis p. 70 fig., TAKAKUWA 714.

Paeromopus buttensis sp. nov. ♂ Big Bar Mt. Ridge, Butte Co., California p. 232, CHAMBERLIN Proc. biol. Soc. Wash. 67 1954.

Pammicrophallus pasaquinae sp. nov. ♂ + ♀ La Union, Pasaquina, El Salvador p. 327 figs., KRAUS Senckenbergiana Biol. 35 1954.

Parapomus subgen. nov. see *Apomus*, KRAUS 421.

Patriziomeris subgen. nov. see *Stygioglomeris*, MANFREDI 484.

Perucricus gen. nov. [Rhinoecridae] defined p. 45; type species *P. rostratus* sp. nov. ♂ Hacienda Taulis, Berg-Urwald, Peru p. 45 figs., KRAUS Senckenbergiana Biol. 35 1954.

Phrurodesmus gracilipes p. 84 figs., TAKAKUWA 714.

Platydesmus lankesteri p. 342 figs.; *P. marmoreus* p. 343 figs., KRAUS 421.

Platyrhacus macroporus p. 89 figs., TAKAKUWA 714.

Polyconoceras (*P.*) *callosus* p. 187 figs.; *P.* (*A.*) *setigerus* p. 188 fig., TAKAKUWA 714.

Polydesmus (*P.*) *csikii* sp. nov. Strázsa Berg, Engpass Vulkan, Karpatenbeckens p. 219 figs.; *P.* (*P.*) *geminidentatus* sp. nov. Körösmező, Mencsill-Gebirge, Karpatenbeckens p. 220 figs.; *P.* (*S.*) *griseoalbus kesselyáki* subsp. nov. Palfa, Karpatenbeckens p. 221 fig.; *P.* (*P.*) *monticola köszegensis* subsp. nov. S. Pongrácz, Karpatenbeckens p. 219 fig.; *P.* (*S.*) *collaris collaris* p. 215 fig.; *P.* (*P.*) *complanatus* p. 217 fig.; *P.* (*P.*) *dadyi* p. 216 figs.; *P.* (*N.*) *denticulatus* p. 217 fig.; *P.* (*S.*) *griseoalbus griseoalbus* p. 216 fig.; *P.* (*P.*) *hamatus hamatus* p. 217 figs.; *P.* (*P.*) *hamatus burzenlandicus* p. 217 fig.; *P.* (*P.*) *hamatus furculatus* p. 217 fig.; *P.* (*S.*) *macilentus* p. 215 figs.; *P.* (*P.*) *montanus montanus* p. 217 figs.; *P.* (*S.*) *polonicus* p. 216 fig.; *P.* (*N.*) *schässburgensis* p. 217 fig.; *P.* (*N.*) *subscabratus subscabratus* p. 217 figs.; *P.* (*N.*) *subscabratus bifidus* p. 217 fig.; *P.* (*N.*) *subscabratus spelaeorum* p. 217 fig.; *P.* (*S.*) *transsilvanicus transsilvanicus* p. 216 fig.; *P.* (*S.*) *tatranus tatranus* p. 216 fig.; *P.* (*S.*) *tatranus rodnaensis* p. 216 fig.; Key to species p. 215, LOKSA An. hist.-nat. Mus. hung. N.S. 5 1954; *P. coriaceus* p. 249 fig., JOHNSON 387; *P. testaceus* ♂ + ♀ redescribed p. 284 figs., ROLFE 631.

Polylepiscus burgeri sp. nov. ♀ Simojovel, Chiapas, Mexico p. 65 fig., CAUSEY Proc. biol. Soc. Wash. 67 1954; *P. trimaculatus* sp. nov. ♂ Sepaciate, Guatemala p. 53 fig.; *P. heterosculptus pococki* subsp. nov. ♂ Tumbala, Chiapas,

Mexico p. 53 fig.; *P.* key to species p. 52, HOFFMAN J. Wash. Acad. Sci. 44 1954.

Polyzonium bivirgatum p. 248 fig., JOHNSON 387.

Pseudamplinus gen. nov. [Euryuridae; Amplininae] defined p. 51; type species *Amplinus orphinus* Chamberlin 1922, p. 51, HOFFMAN J. Wash. Acad. Sci. 44 1954.

Pseudoeurydesmus acuminatus sp. nov. ♂ Iguaçu, Brazil p. 117 figs.; *P. herteli* sp. nov. ♂ Guaratuba, ♀ Piraquara and other localities, Brazil p. 115 fig.; *P. langei* sp. nov. ♂ Bocaiuva do Sul, Brazil p. 113 fig., SCHUBART Arq. Mus. Paranaense 10 1954.

Pseudopolydesmus serratus p. 249 fig., JOHNSON 387.

Pseudospirobolellus bulbiferus p. 184 fig., TAKAKUWA 714.

Ptyoiulus pennsylvanicus p. 250 figs., JOHNSON 387.

Pyrgocyphosoma picenum sp. nov. ♂ + ♀ Potenza, Marche, Italy p. 118 figs., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Rhinocricus dispar sp. nov. ♂ Morechal, Delta-Amacuro, Venezuela p. 60 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954; *R. mertensi* sp. nov. ♂ + ♀ Sonsonate, El Salvador p. 334 figs., KRAUS Senckenbergiana Biol. 35 1954.

Rhysodemus sandersi sp. nov. ♂ Tamazunchale, San Luis Potosi, Mexico p. 64 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954; *R. bifidus* p. 64 fig.; *R. chelifer* p. 61 fig.; *R. geniculatus* p. 65 fig.; *R. holstii* p. 62 fig.; *R. ikaoensis* p. 58 fig.; *R. nepturus* p. 61 fig.; *R. scutata* p. 63 fig.; *R. semicircularis* p. 66 figs.; *R. shirozui* p. 63 fig.; *R. spiralipes* p. 60 fig.; *R. taiwanus* p. 59 figs.; *R. tuberculatus* p. 59 figs., TAKAKUWA 714.

Riukiaria falcifera p. 68 figs., TAKAKUWA 714.

Riukiupeltis jamashinai p. 52 figs., TAKAKUWA 714.

Savilus immaculatus p. 250 fig., JOHNSON 387.

Salvadoria gen. nov. [Vanhoeffeniidae] defined p. 314; type species *S. alata* sp. nov. ♂ Laguna Verde, El Salvador p. 315 figs.; *S. alata propinqua* subsp. nov. ♂ + ♀ Laguna de Las Ranas, El Salvador p. 315 fig.; *S. argentea* sp. nov.

♂ Hacienda Los Planes, Metapan, El Salvador p. 316 figs.; *S. furcata* sp. nov. ♂ Monte Cristo, Metapan, El Salvador p. 316 fig.; *S. sagittalis* sp. nov. ♂ + ♀ Laguna Verde, El Salvador p. 316 fig.; *S.* key to species p. 314, KRAUS Senckenbergiana Biol. 35 1954.

Scaphiostreptus (*Scaphiostreptus*) *salvadoricus* sp. nov. ♂ La Rabida: ♀ San Jorge, Santa Ana, San Salvador p. 337 fig., KRAUS Senckenbergiana Biol. 35 1954.

Scytonotus amandus new to Wyoming p. 223, CAUSEY 144; *S. granulatus* p. 249 figs., JOHNSON 387.

Seminellogon cerroazulensis sp. nov. ♂ Cerro Azul, Chiriqui, Panama p. 54 fig., HOFFMAN J. Wash. Acad. Sci. 44 1954.

Semionellus placidus p. 249 fig., JOHNSON 387.

Sichotanus longipes p. 54 figs., TAKAKUWA 714.

Siphonophora andecola sp. nov. ♂ + ♀ Abra Porculla, Berg-Urwald, Peru p. 51 figs.; *S. porcullae* sp. nov. ♂ + ♀ Abra Porculla, Berg-Urwald, Peru p. 54 figs., KRAUS Senckenbergiana Biol. 35 1954; *S. trifini* sp. nov. ♂ + ♀ Monte Cristo, Metapan, El Salvador p. 343 figs., KRAUS Senckenbergiana Biol. 35 1954; *S. spinosa* p. 223 figs.; *S. takashimai* p. 222 fig., TAKAKUWA 714.

Skleroprotopus hakui p. 146 figs.; *S. ikedai* p. 143 figs.; *S. inferus* p. 139 figs.; *S. insularum* p. 145 fig.; *S. laticozalis* p. 144 fig.; *S. montanus* p. 142 fig.; *S. okiensis* p. 142 fig.; *S. torii* p. 141 fig., TAKAKUWA 714.

Spelaeglomeris andreinii ♂ p. 85 figs., MANFREDI 484.

Speophilosoma montanus p. 132 figs., TAKAKUWA 714.

Sphaeriodesmus longiramus sp. nov. ♂ + ♀ Finca San Jorge, Santa Ana, El Salvador p. 319 figs.; *S. nodulosus* sp. nov. ♂ Hacienda Los Planes, Metapan, El Salvador p. 318 figs., KRAUS Senckenbergiana Biol. 35 1954.

Spirobolellus phosphoreus p. 185 figs., TAKAKUWA 714.

Spirobolellus americanus p. 249 figs., JOHNSON 387.

Spirostrephon lactarium p. 250 fig., JOHNSON 387.

Stygioglomeris (*Patriziomeris* subgen. nov.) *pertosae* sp. nov. ♂ Grotta di Pertosa, Salerno, Italy p. 81 figs., MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Syntelapodeuma formosanum p. 126 fig.; *S. gracilipes* p. 125 figs.; *S. hokkaidense* p. 127 fig., TAKAKUWA 714.

Taiulus tiganus new to Utah p. 226, CAUSEY 144.

Takakuwaia furculigera p. 69 figs., TAKAKUWA 714.

Taulidesmus gen. nov. [Cryptodesmidae: Pyrgodesminae] defined p. 40; type species *T. nodosus* sp. nov. ♂ Hacienda Taulis, Berg-Urwald, Peru p. 40 figs., KRAUS Senckenbergiana Biol. 35 1954.

Tokyosoma takakuwai p. 129 figs., TAKAKUWA 714.

Trichopetalum album p. 251 fig., JOHNSON 387.

Trichozonium hirsutum p. 217 figs.; *T. okazaki* p. 218 figs., TAKAKUWA 714.

Trigoniulus laminatus p. 195 fig.; *T. niger* p. 201 figs.; *T. palaoensis* p. 195 fig.; *T. segmentatus* p. 193 fig.; *T. tertius* p. 200 fig.; *T. takahasii* p. 196 fig.; *T. takakuwai* p. 199 figs.; *T. torii* p. 198 fig., TAKAKUWA 714.

Tubaphe gen. nov. [Xystodesmidae] defined p. 222; type species *T. levii* sp. nov. ♂ + ♀ Graves Creek Camp Ground, Olympic Nat. Forest, Jefferson Co., Washington p. 223 figs., CAUSEY Pan Pacific Ent. 30 1954.

Typhloiulus tobias subsp. *pygmaeus* subsp. nov. ♂ Grotta di Sarcedo, Vicenza, Italy p. 100, MANFREDI Atti Soc. ital. Sci. nat. 92 1953.

Underwoodia iuloides p. 251 fig., JOHNSON 387.

Uroblaniulus canadensis p. 250 figs.; *U. duz* p. 250 figs., JOHNSON 387.

Utoiulus leechi new to Alberta, Canada p. 226; *U. utus* new to Wyoming p. 226, CAUSEY 144.

Varyomus gen. nov. [Euryuridae: Aphelidesminae] defined p. 56; type species *Aphelidesmus confluens* Chamberlin 1950, p. 56 fig., HOFFMAN J. Wash. Acad. Sci. 44 1954.

Venezueneptus gen. nov. [Spirostreptidae] defined p. 58; type species

V. liber sp. nov. ♂ + ♀ Morechal, Delta-Amacuro, Venezuela p. 58 figs., CAUSEY Proc. biol. Soc. Wash. 67 1954.

Yamashinaium noduligerum p. 220 fig., TAKAKUWA 714.

Yosidairulus tuberculatus p. 150 figs., TAKAKUWA 714.

Zinnaria butlerii p. 249 fig., *Z. proxima* p. 249, JOHNSON 387.

SYMPHILIDA

Synopsis of African species p. 238, SCHELLER 652.

Faunal list. — Pyrenees, France, ROCHAIX 621; Denmark, SCHELLER 653.

Hanseniella afromontana sp. nov. Mt. Aberdare, Uganda p. 229 figs.; *H. elgoensis* sp. nov. Kiparawa River, Mt. Elgon, Uganda p. 233 fig., SCHELLER Ark. Zool. 7 1954; *H. caldaria* ♀ re-described p. 26 figs., HINSCHBERGER 332; *H. indecisa* re-described p. 1 figs., SCHELLER 651.

Millotellina media sp. nov. Foullassi—Sangmelina, Cameroons p. 593 figs., JUPEAU Bull. Mus. nat. Hist. Paris (2) 26 1954.

Ribautiella machadoi sp. nov. ♀ Dundo, Angola, also Niangbo, Ivory Coast and ♂ Environs of Adiopodoumé, Ivory Coast p. 20 figs.; *R. remyi* sp. nov. Dundo, Angola p. 23 figs.; *R. schoutedeni* sp. nov. ♀ Dundo, Angola also several localities Belgian Congo and Ivory Coast p. 17 figs.; *R. zagnanadina* re-described p. 13 figs., HINSCHBERGER Publ. Cult. Comp. Diam. Angola No. 23 1954.

Scutigerella pagesi sp. nov. ♀ Ascain, Basses-Pyrénées, France p. 101 figs., JUPEAU Bull. Mus. Hist. nat. Paris (2) 26 1954.

PAUROPODA

Faunal list.—Denmark, SCHELLER 653.

HANSENAUROPINAE subfam. nov. EURYPAUROPIDAE p. 108, REMY Bull. Mus. Hist. nat. Paris (2) 26 1954.

Allopauropus aculeatus sp. nov. between Tshikapa and Lulubourg, Belgian Congo p. 250 fig.; *A. congolanus* sp. nov. between Tshikapa and Lulubourg, Belgian Congo p. 253 fig.; *A. schoutedeni* sp. nov. between Tshikapa

and Luluabourg, Belgian Congo p. 251 fig.; *A. acutus* p. 254 fig., REMY Ann. Mus. Congo belge N.S. 4to Zool. 1 1954; *A. scoparius* sp. nov. ♂ + ♀ Sainte-Croix-de-Volvestre, Ariège, Pyrenées p. 141 figs.; *A. verecundus* sp. nov. Sainte-Croix-de-Volvestre, Ariège, Pyrenées p. 143 figs., REMY Bull. Soc. ent. Fr. 59 1954; *A. brevisetus* and *A. hessei* new to Switzerland p. 55, GISEN 289; *A. carolinensis* redescribed p. 125 fig., REMY 606; *A. panamensis* p. 293 fig., REMY 607.

Asphaeridiopus cf. *pasqualinii* p. 128 fig., REMY 606; *A.* sp. Jylland, Thisted, Denmark p. 12 figs., SCHELLER 653.

Hansenauiropus gen. nov. [Eury-pauropidae: Hansenauiropinae] defined p. 104; type species *H. gratus* sp. nov. ♂ Stewart Id., New Zealand p. 105 figs., REMY Bull. Mus. Hist. nat. Paris (2) 26 1954.

Millotauropus machadoi p. 249 fig., REMY 602.

Panamauropus gen. nov. [Tetramerocerates] [new family between Brachypauropide and Eurypauropidae] defined

p. 295; type species *P. williamsi* sp. nov. Barro Colorado, Panama p. 295 figs., REMY Rev. franç. Entom. 21 1954.

Polypauropus duboscqi new to Switzerland p. 55, GISEN 289.

Scleropauropus (S.) *simplex* sp. nov. Le Banco, Ivory Coast p. 255 fig., REMY Ann. Mus. Congo belge N.S. 4to Zool. 1 1954.

Stylopauropus pedunculatus var. *bira-mosus* var. nov. Jylland, Thisted, Denmark p. 7 fig., SCHELLER Ent. Medd. Københ. 27 1954.

ONYCHOPHORA

Distribution, VACHON 748.

Heteroperipatus gen. nov. [Peripatidae] defined p. 148; type species *H. engelhardi* sp. nov. ♂ + ♀ Finca El Carmen, San Vicente, El Salvador p. 148 figs., ZILCH Senckenbergiana Biol. 35 1954.

Oroperipatus koepchei sp. nov. ♀ Weges von Olmos, Jaén, Peru p. 152 figs., ZILCH Senckenbergiana Biol. 35 1954.

